NGB

NEPA HANDBOOK

Guidance on Preparing Environmental Documentation for Army National Guard Actions in Compliance with the National Environmental Policy Act of 1969

Prepared for

Army National Guard

by

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1.0 INTRODUCTION AND OVERVIEW

1.1 Application of the National Environmental Policy Act to Army National Guard Activities

The Army National Guard (ARNG), a component of the United States Army, is a federal agency, subject to federal laws and regulations. The ARNG's actions and activities encompass a broad spectrum of mission-related and installation[1] support activities including, but not limited to, the following:

- Real property master planning (RPMP)
- Real property acquisition, granting of rights for specific use, and disposal
- Military construction
- Equipment modernization
- Military training
- Force management
- Environmental management plans
- Innovative Readiness Training

The ARNG considers environmental stewardship an integral part of its mission. Nonetheless, ARNG activities, by their very nature, have the potential to directly and indirectly adversely affect the environment as they are conducted or implemented. Because of this potential for unintended environmental damage, the need to comply with environmental laws and policies, and the responsibilities inherent in good stewardship, ARNG planners, managers, and commanders share a responsibility for the protection of human health and the environment and for the care and wise use of the natural and cultural resources entrusted to them. The ARNG's compliance with environmental laws and policies is complicated by the fact that units are located throughout the United States, activities are often conducted on widely separated sites throughout a state, and military and civilian Guard personnel frequently change assignments as a result of rotation and promotion. In addition, because the ARNG is also a state agency, it may engage in state missions that are subject to individual state-level requirements.

The National Environmental Policy Act of 1969 (NEPA) (see Appendix A) requires that federal agencies consider and document the potential environmental effects associated with major federal actions conducted *within* the United States, its territories, and its possessions, including all waters and airspace subject to the territorial jurisdictions of the United States.[2] With the exception of the U.S. Army Kwajalein Atoll in the Republic of the Marshall Islands,[3] the provisions of NEPA are *not* applicable in foreign nations (e.g., NEPA would not apply to an ARNG construction project in Bosnia or Kuwait). As discussed in Section 3.10, for major federal actions conducted *outside* the United States, other statutes and regulations for assessing the potential environmental effects

[1] The definition of an *installation*, as used by the ARNG, pertains to the boundaries of the state and includes all ARNG facilities and training areas.

[2] The territories and possessions of the United States include Puerto Rico, the Virgin Islands, American Samoa, Wake Island, Midway Island, Guam, Palmyra Island, Johnston Atoll, Navassa Island, and Kingman Reef.

[3] Through an agreement with the Marshallese Government, U.S. actions at the U.S.Army Kwajalein Atoll are subject to NEPA compliance in accordance with Council on Environmental Quality (CEQ) regulations.

of such actions might be applicable. Activities in foreign countries might also be subject to the host nation's requirements for environmental planning. The applicability of such requirements is normally addressed in status of forces agreements or other agreements.

Except in some state emergency situations, the ARNG acts as a federal agency, and therefore it must comply with the requirements of NEPA, its implementing regulations, and other related federal statutes. The NEPA process, described later in this section, ensures that the ARNG considers environmental factors in conjunction with the technological, economic, and mission-related components of a decision and that the public is informed and appropriately involved in the decision-making process.

1.2 Purpose of the Handbook

At one time or another, almost anyone associated with ARNG activities might be called upon to contribute to, or might be affected by, the NEPA process—through participation as a preparer of required analysis and documentation, a data provider, a reviewer, a planner, a decision maker, or an implementer awaiting guidance before beginning an action. NEPA implementation and compliance, however, are often complicated by frequent changes in participants at all levels as a result of the normal rotation of military and civil service personnel. Newcomers, military and civilian, need to quickly and thoroughly understand their roles in the NEPA process to participate effectively. The purpose of this manual is to provide a common frame of reference and to familiarize all participants with the purpose and procedures of the NEPA process in order to facilitate compliance for ARNG activities and, by so doing, to ensure that environmental considerations are consistently integrated with—and form part of the basis for—the planning and implementation of ARNG actions.

The handbook is intended to provide comprehensive "one-stop" information consistent with NEPA and its implementing regulations but specific to the ARNG. The information is presented in a simple, understandable, and manageable format, suitable for use throughout the ARNG to (1) standardize and streamline the process for NEPA compliance and (2) outline the roles and responsibilities at each participating level. The handbook provides detailed information needed by all participants in the NEPA process, including proponents, preparers, and reviewers. It provides step-by-step guidance, recommendations, and suggestions for effective and efficient compliance. It also describes the applicability and some of the unique requirements of related environmental statutes and regulations to major federal actions conducted by the ARNG outside the United States. Users are encouraged to follow closely the guidance and procedures presented in this handbook. Exceptions should be discussed in advance with the National Guard Bureau (NGB), Environmental Programs Division (ARE), Conservation Branch.

Various states have also adopted a requirement for an environmental review at the state level. This process is not specifically covered in this handbook, although the overall process of preparing state-level environmental analysis and documentation is generally quite similar to that described here for the federal NEPA process. Units with the requirement to conduct state-level environmental reviews are encouraged to negotiate an alternative review process with the state government that will allow fulfillment of both federal and state regulatory requirements concurrently.

This NEPA handbook is being developed as a "living" document, compiled in a looseleaf format, to facilitate updating as new guidance becomes necessary to address additional or changing issues. This handbook is not a reinvention of current Department of Defense (DoD) or ARNG NEPA guidance; rather, it is a comprehensive guide for the ARNG for implementing current

laws, regulations, and policies related to NEPA as the act applies to ARNG activities. It includes a variety of helpful "how-to" information and "lessons learned" for ARNG personnel involved in the NEPA process, whether they are newcomers or experienced practitioners.

1.3 What the Handbook Covers

The handbook provides comprehensive guidance divided into 10 sections.

Section 1 **Introduction and Overview.** Provides interpretive background information on NEPA and an overview of the ARNG's NEPA process. It is intended primarily for persons with limited NEPA experience.

Section 2 **Roles and Responsibilities.** Identifies key players and describes the various levels and nature of internal ARNG, Army, and other participant involvement in the NEPA process.

Section 3 **NEPA Interface With Selected ARNG Programs and Actions.** Describes ARNG actions and the applicability of NEPA and other regulatory requirements to them.

Section 4 **Planning and Initiating a NEPA Analysis.** Describes the initial stages of the NEPA process and provides directions for properly characterizing, framing, and focusing NEPA analysis and documentation.

Section 5 **Categorical Exclusions and Records of Environmental Consideration.** Describes the purpose of a Categorical Exclusion (CX) and Record of Environmental Consideration (REC) in the NEPA process, including when and how to use them.

Section 6 **Environmental Assessment Preparation and Content.** Provides program-focused information and guidance on the Environmental Assessment (EA) process and format required by the ARNG under the President's Council on Environmental Quality (CEQ) regulations and Army Regulation (AR) 200-2.

Section 7 **Environmental Impact Statement Preparation and Content.** Provides program-focused information and guidance on the Environmental Impact Statement (EIS) process and format required by the ARNG under the CEQ regulations and AR 200-2.

Section 8 **Resources and Analyses.** Provides specific guidance for data collection and analysis of environmental resources and conditions most often encountered in evaluating ARNG proposed actions, including guidance on treating cumulative effects.

Section 9 **Document Review, Processing, and Approval.** Describes the mechanics, reviews, and approvals for the ARNG's NEPA process from the early stages of analysis and document development to the initiation of the action.

Section 10 **References.** Identifies sources of information of interest to the NEPA practitioner.

1.4 The National Environmental Policy Act and Its Implementing Regulations

NEPA was signed into law by President Nixon on 1 January 1970. It is a federal statute that requires the identification and analysis of potential environmental effects of certain proposed federal actions before those actions are initiated. NEPA legislated a structured approach to environmental impact analysis in the planning of federal agency programs and projects. Specifically, it requires that for every proposal for legislation and other federal actions, federal agencies use a systematic, interdisciplinary approach that evaluates the potential environmental consequences associated with the proposed action and considers alternative courses of action. In general, NEPA analyses are not required for ongoing operations and activities unless a change to them is being considered.

NEPA also contains specific requirements for informing and involving the public. It is a "full disclosure" law with provisions for public access to and full participation in the federal decision-making process. The intent of NEPA is to protect, restore, or enhance the environment through well-informed federal decisions. This act is premised on the assumption that if federal proponents consider the environmental effects of proposed actions and provide information on those effects to the decision makers and the public, the quality of federal decisions will improve.

1.4.1 The NEPA Process

Regulations for implementing NEPA are published in Title 40 of the *Code of Federal Regulations* (CFR), Parts 1500-1508, *Regulations for Implementing the Procedural Provisions of the National Environmental Policy Act* (Appendix B).

The ARNG's NEPA process is designed to facilitate high-quality National Guard decision making that is based on a clear understanding of an action's potential for environmental consequences. The process also includes taking additional actions that protect, restore, and enhance the environment. It is a fundamental management-support mechanism that involves:

- *Predecision analysis*, a forecast tool that informs the decision maker and also gives the public the opportunity to provide information relevant to the pending decision.
- *Postdecision management,* a requirement to measure actual performance against desired goals and objectives.

The process is accomplished by

- Integrating other environmental requirements into NEPA analyses and ARNG decisions
- Operating on the principle of "full disclosure"
- Involving the public
- Seeking and analyzing relevant technical information using a multidisciplinary approach
- Identifying associated direct, indirect, and cumulative effects
- Appropriately documenting analyses, their results, and decisions resulting from them
- Summarizing technical information for the public and the decision maker
- Identifying a preferred course of action after considering realistic alternatives
- Designing and implementing mitigation and monitoring, where appropriate

1.4.2 Implementing Regulations and Guidance

From 1973 to 1978, the CEQ had guidelines in effect for the preparation of environmental impact analyses. Executive Order 11991 (*Protection and Enhancement of Environmental Quality*) directed the CEQ to establish regulations for these studies. The CEQ solicited extensive public and agency input and in 1978 issued the regulations at 40 CFR Parts 1500-1508. The Council's goals were to reduce paperwork, reduce delays, and produce better decisions based on better analyses. The regulations emphasized that agencies should clearly and concisely present only the most pertinent background information, emphasizing an analysis of real alternatives and issues.

NEPA and the CEQ regulations require federal agencies to develop internal implementing procedures to ensure that environmental factors are considered in decision making by using a systematic, interdisciplinary analytical approach. Three CEQ memoranda issued in the early 1980s—*Forty Most Asked Questions* (Appendix C), *Scoping Guidance* (Appendix D), and *Guidance Regarding NEPA Regulations* (Appendix E)—have clarified various aspects of the CEQ regulations. More recently, CEQ issued a handbook on analyzing cumulative effects, entitled *Considering Cumulative Effects Under the National Environmental Policy Act* (January 1997).[4]

DoD Instruction 4715.9 (*Environmental Planning and Analysis*) provides NEPA guidance for the military services and other DoD components in the United States. DoD Directive 6050.7 (*Environmental Effects Abroad of Major Department of Defense Actions*) includes provisions applicable to ARNG actions conducted outside the United States. For the ARNG, the applicable implementing regulation for NEPA is AR 200-2, *Environmental Effects of Army Actions* (Appendix F). AR 200-2 recognizes that "the proposals and activities of the ARNG involving federal funding."

AR 200-2, which incorporates and elaborates on CEQ and DoD regulations and guidance, does the following:

- Sets forth policies, responsibilities, and procedures for integrating environmental considerations into Army and ARNG planning and decision making.
- Describes the Army and ARNG process for preparing an environmental assessment (EA) or an environmental impact statement (EIS). (See Section 1.5 for an explanation of these terms.)
- Establishes criteria for determining Army and ARNG actions that may be "categorically excluded" from requirements to prepare an EA or an EIS.

The NGB provides specific NEPA guidance annually with an "All States" memorandum (see Appendix G). This mechanism permits timely updating of practices and announcement of new or revised requirements for completion of NEPA documentation. Proponents need to be aware of the requirements in the latest All States memorandum because the NGB review proceeds on the basis of information contained in it.

In some cases, particularly where the property of another federal agency is involved, the ARNG might need to follow that agency's NEPA implementing regulations for preparing and

[4] CEQ's handbook entitled *Considering Cumulative Effects Under the National Environmental Policy Act* (January 1997) can be obtained by calling the CEQ in Washington, DC, at (202) 395-5750, or through the CEQ web site at http://ceq.eh.doe.gov/nepa/nepanet.htm.

documenting the NEPA analysis. Early coordination with the other agency is required in any such case (see Section 2.2.4).

1.4.3 Complying with NEPA

NEPA requires the ARNG to make a definitive statement about (1) the potential environmental effects of the proposed action, (2) adverse effects that cannot be avoided, and (3) alternatives to the proposed action. The analysis must fully disclose the environmental effects of the action and demonstrate that the ARNG proponent and the decision maker have taken an interdisciplinary "hard look" at the environmental consequences of implementing the action.

A quality analysis is essential to making quality decisions. Good analysis must build on regulatory compliance, legal sufficiency, appropriate mitigation, provisions for mitigation monitoring, consideration of public concerns, and adherence to ARNG and appropriate state-level NEPA guidance—all identified and incorporated into the analysis from the start.

The environmental analysis of an ARNG proposed action must parallel other decision support processes to help commanders and principal staff officers make sound decisions. It cannot be an "after-the-fact" justification for implementation of decisions already made. Such justification can lead to regulatory agency and public mistrust, the potential for otherwise avoidable adverse effects on the environment, and a court order stopping the action. What the analysis *must* do is inform the leadership, clearly and concisely, of all the potential environmental consequences of the proposed action.

1.4.4 Integration of Other Environmental Regulations

The NEPA process does not replace either the procedural or substantive requirements of other environmental statutes and regulations. Rather, it addresses them in one place so that the decision maker has a concise, comprehensive view of the major environmental issues and requirements and can understand the interrelationships and potential conflicts among the environmental components of a proposed action. NEPA is the "umbrella" that facilitates project coordination by integrating compliance requirements that might otherwise proceed independently. Examples of other environmental statutes and regulations often integrated into the NEPA process are shown in Figure 1-1. Examples of ARs that implement these other laws are AR 200-1, *Environmental Protection and Enhancement*; AR 200-3, *Natural Resources—Land, Forest and Wildlife Management*; and AR 200-4, *Cultural Resources Management.*

According to CEQ regulations, the requirements of NEPA must be integrated "with other planning and environmental review procedures required by law or by agency practice so that all such procedures run concurrently rather than consecutively" (40 CFR 1500.2(c)). The purposes of integrating the NEPA process into early planning for ARNG activities are as follows:

- Ensuring appropriate consideration of regulatory requirements during the NEPA process.
- Eliminating delay and duplication of effort.
- Emphasizing cooperative consultation among agencies before and during the development of programs and the preparation of the NEPA analysis.

Applying an integrated NEPA process early in ARNG planning and decision making results in better decisions, a document made more meaningful through the coordinated and focused efforts of all interested parties, and the timely completion of all required environmental analyses.

National Environmental Policy Act (NEPA)

NEPA is a comprehensive process that provides for the integration of environmental compliance requirements associated with federal actions.

Figure 1-1. Integrating Other Environmental Regulatory Requirements into the NEPA Process

1.5 Basic Components and Documents of the ARNG NEPA Process

The NEPA process includes various levels of environmental analysis and documentation, as shown in Figure 1-2. The type of ARNG action proposed, the environmental issues involved, and other considerations associated with the action determine the level of analysis and documentation required. The basic documentary components of the process (not all of which might apply in a given situation) are summarized in the following sections.

1.5.1 Categorical Exclusion

A categorically excluded action is an action that has been determined not to have a significant effect on the human environment, either individually or cumulatively, and does not normally require formal environmental analysis. Every federal agency has a list of such actions. AR 200-2 (see Appendix F) contains the Army's list of categorically excluded actions, along with a list of screening criteria used to determine when a CX is applicable. Section 5 of this handbook provides detailed guidance on the nature and appropriate use of CXs for certain ARNG actions.

1.5.2 Record of Environmental Consideration

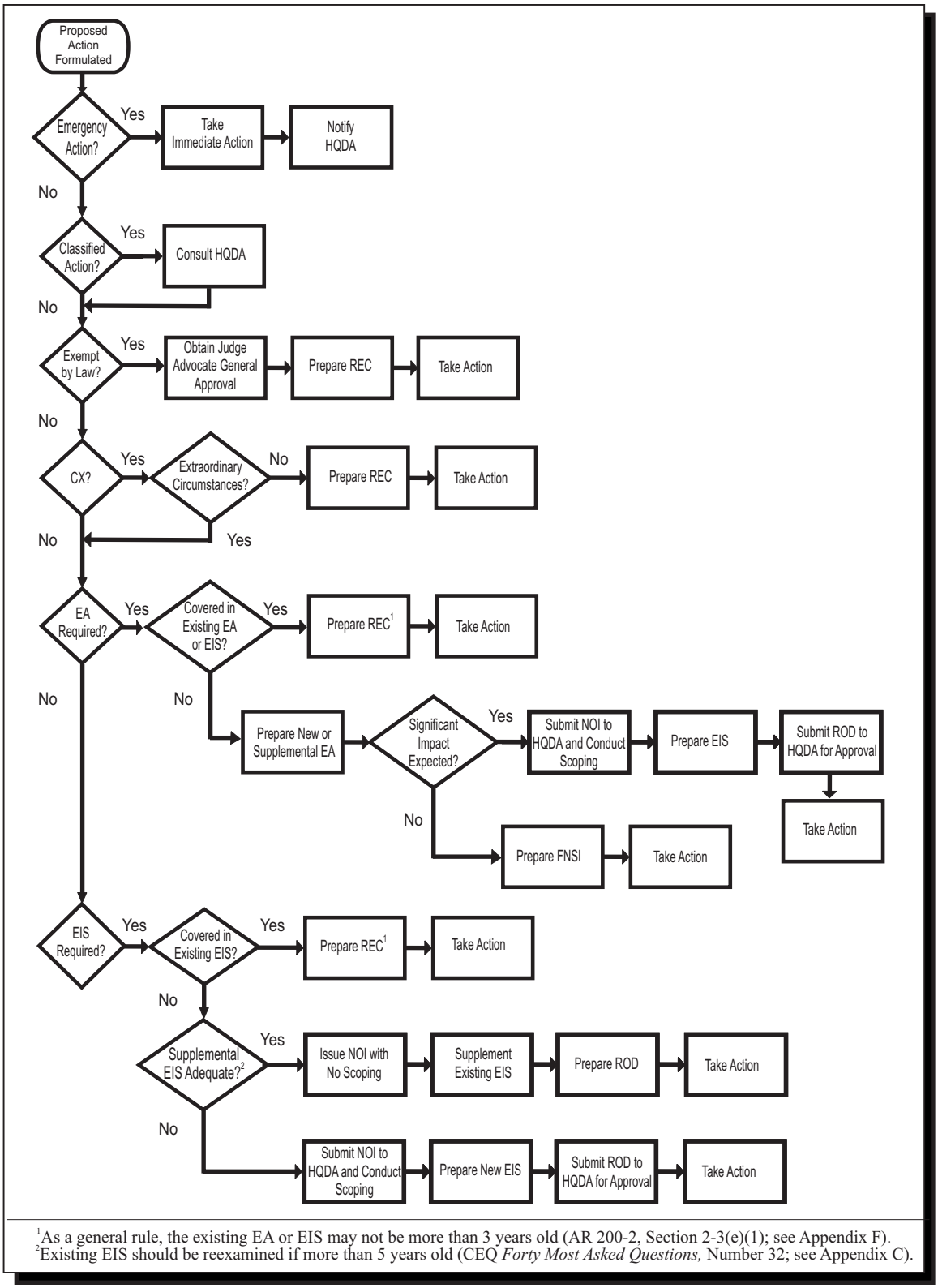
A REC is not a NEPA document but an official "decision document" in the ARNG's NEPA process. It is a written record that an action has been evaluated and either (a) falls under the Categorical Exclusion requirements specified in AR 200-2 or (b) has been appropriately analyzed and documented in another NEPA document. A REC should briefly describe the proposed action, provide its anticipated time frame, and explain why further environmental analysis is not needed. Section 5 of this handbook provides detailed guidance on preparing a REC and the requirements for completing an accompanying checklist.

1.5.3 Environmental Assessment

The CEQ regulations (40 CFR 1508.9) describe an EA as a concise public document that provides sufficient evidence and analysis for determining whether to prepare an EIS or a Finding of No Significant Impact (FNSI). Its purpose is to assist the decision maker in understanding the environmental effects of a proposed action and alternatives, and in determining whether any effects are significant and thus warrant the preparation of an EIS. An EA is the type of NEPA analysis most commonly conducted by the ARNG for actions that require written consideration of the environmental effects of a proposed action beyond the preparation of a REC. ARNG procedures (with few exceptions) provide the public the opportunity to comment on a Draft EA and to review the final document.

An EA results in one of the following decisions: to prepare a FNSI, to initiate a Notice of Intent (NOI) that the ARNG intends to prepare an EIS, or to take no action on the proposal. An EA should not be initiated when significant effects are obvious or can be presumed.[5] The CEQ regulations (40 CFR 1501.3) allow an agency to initiate the EIS process at any time without preparing (or completing) an EA. Section 6 of this handbook contains step-by-step procedures for preparing ARNG EAs.

[5] The CEQ regulations use the terms *effects* and *impacts* synonymously and interchangeably. Because the term *impact* can signal, in a legal context, the need for an EIS, it is preferable to use the term *effect* in an EA when describing the environmental consequences resulting from a proposed action unless those consequences are significant.



[1]As a general rule, the existing EA or EIS may not be more than 3 years old (AR 200-2, Section 2-3(e)(1); see Appendix F).
[2]Existing EIS should be reexamined if more than 5 years old (CEQ *Forty Most Asked Questions,* Number 32; see Appendix C).

Figure 1-2. Summary of the ARNG's NEPA Process

In some instances, an ARNG proponent will need to identify and evaluate only a limited number of environmental resources. As noted in the All States Memorandum of 6 December 2000 (see Appendix G), in such a case a focused EA consisting of 5 to 15 pages should be prepared, and opportunity for public review and comment should be provided.

Proponents must be especially attentive to focusing their impacts analysis. Only those environmental resources that could potentially be affected by a proposed action or that are of public concern should be included in the Affected Environment description and analyzed under Environmental Consequences. Environmental resources that are unaffected by a proposed action should be identified during scoping (see Section 1.5.6). The level of detail to be applied to each particular resource area should be commensurate with the level of importance and concern for that resource and the issues it presents. If a particular resource is excluded from discussion altogether, an explanation for why it was excluded (e.g., it would not be affected by the proposed action or alternatives, or it is covered by prior NEPA reviews) should be provided in the introduction to the section describing the Affected Environment. (See 40 CFR 1501.7(a)(3) for further discussion on this topic.) Use of this approach will demonstrate that the proponent has focused the required "hard look" on those resources on which a significant impact might actually occur. An example of a concise EA is the Oregon ARNG *Construction of Armed Forces Reserve Center/Emergency Coordination Facility, Salem, Oregon*.

1.5.4 Finding of No Significant Impact

If an EA concludes that the resulting effects are not significant, a FNSI is prepared to document this conclusion and explain that an EIS will not be prepared. A FNSI includes a brief description of the proposed action and any alternatives considered, a short discussion of environmental effects likely to result from the action, and a summary of facts leading to the FNSI. The FNSI also identifies a point of contact and provides the address of the proponent's organization. ARNG regulations specify that the FNSI must be made available to the public before the proposed action is initiated. Although the FNSI is a stand-alone legal document, it should always be attached to the Final EA when submitted for public review. The FNSI and the EA to which it applies should be retained on file by the proponent's organization for 5 years. Sample FNSIs are shown in Appendix H.

1.5.5 Notice of Intent

The NOI is an official public notification that a formal, usually full-scale NEPA analysis (EIS) is planned for a proposed action. The NOI is published in both the *Federal Register* and local newspapers to advise the public and other entities of the ARNG's intent. The NOI identifies the purpose and need for the action, states the proposed action, identifies reasonable alternatives (to the extent known at the time), and presents the expected issues to be analyzed. It also "starts the clock" for public involvement by outlining the ARNG's public scoping process, as applicable, and gives the name, address, and telephone number of the ARNG's point of contact. Although normally used for EISs, NOIs may also be used for EAs, particularly those that assess actions of national interest. A sample NOI is shown in Appendix I.

1.5.6 Scoping Process

Scoping is the generally formal process of involving others in identifying the issues and resources to be considered for analysis in an EIS. Good scoping is essential to a good analysis. Scoping begins by involving federal agencies, state and local governments, special interest groups, and the public in identifying issues and concerns.

The scoping process may consist of solicitation of written comments (including those submitted electronically), a meeting (or series of meetings), or both. The decision on which mechanisms and techniques to use depends on time and resource constraints, and on the likelihood of controversial issues. Scoping also assists in initiating collection of baseline data to be described in the Affected Environment section of the EIS. Scoping can result in changes, additions, or deletions to the scope, alternatives, and focus of the analysis. ARNG regulations require public scoping for an EIS. Although formal scoping is not required for an EA, in many cases it has proven beneficial.

1.5.7 Environmental Impact Statement

An EIS is a detailed study that analyzes the environmental effects of a proposed action and its alternatives and includes an extensive public involvement process. The potential for significant environmental effects or serious public controversy associated with a proposed action is usually the basis for preparing an EIS. Like an EA (as defined in Section 1.5.3), an EIS analyzes the effects of the proposed action and alternatives on the natural and socioeconomic environment. It describes the baseline (affected environment) against which effects are evaluated and then identifies potential consequences and appropriate mitigation. An EIS, however, is typically more detailed than an EA in explaining environmental issues and resulting effects. The public is given formal opportunity to comment on the Draft EIS (DEIS) and to review the Final EIS (FEIS). An exception to the public's opportunity to comment occurs, however, in the case of actions that are classified for national security reasons (see Section 3.9 for a discussion of classified actions). Following completion of an EIS, a decision on the proposed action is documented with a Record of Decision (ROD) (see Section 1.5.9). Section 7 of this handbook contains detailed guidance on preparing ARNG EISs.

1.5.8 Notice of Availability

A Notice of Availability (NOA) is a formal public notification that an agency's environmental document is being made available to other agencies and the public. Published in the *Federal Register,* it is intended to inform the public of the availability of a DEIS or the findings of an FEIS (or of an EA/FNSI of national interest) and to initiate a formal comment or review period. Similar notices for EISs and RODs are also published in local newspapers. In most cases, public notices for EAs and FNSIs are published only in local newspapers and not in the *Federal Register*. A sample NOA is shown in Appendix J.

1.5.9 Record of Decision

A ROD is a concise public document, issued at the completion of an EIS, that identifies the findings and conclusions reached by the ARNG in making its decision for a preferred alternative. It summarizes the major issues and considerations, describes the potential effects, documents the decision, and identifies necessary steps (mitigation measures) to lessen the effects on the environment. The ROD, or NOA of the ROD, is published in the *Federal Register*; similar notices are published in local newspapers.

1.6 NEPA Concepts Commonly Encountered

1.6.1 Cumulative Effects

CEQ regulations (40 CFR 1508.7) define cumulative effects as "the impact on the environment which results from the incremental impact of the action when added to other past, present, and

reasonably foreseeable future actions regardless of what agency (federal or non-federal) or person undertakes such other actions." Cumulative effects, therefore, result from the combination of individual effects of multiple actions over time. In the preparation of NEPA documents, cumulative effects must be evaluated along with the direct effects (those which occur at approximately the same time and place as the proposed action) and indirect effects (those which occur later in time or farther removed in distance) of each alternative action. Evaluation of cumulative effects should extend to all relevant matters within the appropriately defined ecosystem potentially affected by a proposed action. Preparers of the environmental impacts analysis must establish logical temporal and spatial boundaries (regions of influence) when examining potential cumulative effects. As cumulative effects are identified, they must be evaluated for their significance (just as effects on individual resources are).

For guidance on the analytic treatment of cumulative effects, see Section 8.20.

1.6.2 Mitigation

The intention of mitigation is to reduce the adverse effects of an action on the environment. CEQ regulations (40 CFR 1508.20) identify five ways to mitigate environmental effects—avoiding, minimizing, rectifying, reducing or eliminating, or otherwise compensating for an environmental effect. Another mitigation technique the ARNG uses is the "adaptive management strategy" (see Section 8.21). Mitigation measures identified in a NEPA document and committed to as part of the decision must be accomplished. Depending on the mitigation commitments identified for a particular action, a monitoring and enforcement program might also be required. For further discussion on mitigation commitments, see Section 8.21).

While conducting analyses for EAs, preparers might discover potential consequences that are "significant" and thus might normally require preparation of an EIS. Proponents may then reevaluate their actions and propose further measures to mitigate probable adverse environmental effects. If it is found that such mitigation would prevent a proposed action from having significant effects, the proponent may conclude the NEPA process with a "mitigated EA/FNSI" rather than preparing an EIS. See Section 6.9 for further guidance on this approach. Specific mitigation measures specified in the FNSI are judicially enforceable.

1.6.3 Consultation

Numerous laws, regulations, and federal policies obligate the proponent to enter into consultation with interested agencies or parties to determine fully the consequences of implementing a proposed action. The results of all consultations should be reduced to writing and included in the appropriate NEPA document as appendices. See Section 8.22 for a complete discussion of consultation requirements encountered in ARNG NEPA practice.

1.6.4 Programmatic Documentation

Programmatic NEPA documents are prepared for analyses conducted on an areawide or subject/topic basis, or for broad federal actions that include a number of phases of individual actions or involve the adoption of new agency regulations or programs. With broad actions, agencies may analyze the effects of their proposals based on common geographic locations or similarities of effects or by stages of development (40 CFR 1502.4).

Programmatic documents may require subsequent additional or tiered (Section 1.6.7) site-specific NEPA analyses (RECs, EAs, or EISs). In such cases, the programmatic document provides the

baseline from which the additional studies can be drawn. Any appropriate follow-on NEPA documents can then concentrate on site- or phase-specific issues. The follow-on documents can efficiently *incorporate by reference* information from the programmatic document (i.e., summarize and cite from existing documentation) to reduce their size without degrading the adequacy of the analysis or agency/public review. (See also 40 CFR 1502.21 for further discussion on this concept.) Examples of broad ARNG actions that could benefit from programmatic documentation include the multistate fielding of a major weapon system, the promulgation or revision of certain ARNG regulations, and major ARNG force restructuring programs.

Programmatic environmental documents are typically initiated and overseen by NGB-ARE for multistate actions. Although the NGB will usually act as the proponent for these documents, the baseline and site-specific information must be gathered by the states identified in the document. Close coordination with the NGB and full support from the affected states are required to realize the reduced costs and accelerated evaluation process that a programmatic document can provide. State participation in the development of programmatic environmental documents, achieved through early and fully knowledgeable "buy-in," is essential for force structure and equipment fielding actions.

See also the discussion of "tiering" in Section 1.6.7.

1.6.5 Supplemental EA/EIS

A Supplemental EA or EIS contains additional analysis and documentation on a proposed action and alternatives. It is prepared when conditions become substantially altered from the action initially proposed or when changes in alternatives or baseline conditions occur after preparation of the initial EA or EIS. According to CEQ guidance, if such changes occur and the proposal has not yet been fully implemented, or if the original analysis addresses a program currently under way, and the EA or EIS is more than 5 years old (see Figure 1-2), the document should be reexamined to determine whether the changes are sufficient to necessitate preparation of a supplemental EA or EIS (CEQ *Forty Most Asked Questions*, Number 32 [Appendix C]). Additionally, if circumstances significantly change after public release of a Draft EA or DEIS but before the Final EA or FEIS has been circulated, supplementing the draft document might be appropriate. (Refer to 40 CFR 1502.9(c)(1) and CEQ *Forty Most Asked Questions*, number 29(b), for further discussion on this concept.)

1.6.6 Legislative EA/EIS

NEPA requires that a "detailed" statement be included in a recommendation or report to Congress on a legislative proposal (per 40 CFR 1506.8). A legislative EA/EIS is intended to satisfy this requirement. The Army has satisfactorily prepared both legislative EAs and EISs in meeting this requirement. CEQ regulations describe the differences between a legislative NEPA analysis and other forms of EAs/EISs described in the Council's regulations and in this handbook. For example, legislative EISs do not result in the filing of a ROD.

1.6.7 Tiering

In the early stages of developing a proposal, the proponent might not be able to fully identify the potential environmental effects that could be associated with the action, either because there is not enough information or because the proposed action has not been developed sufficiently to be clearly defined. When complete information is lacking up front, incremental decision making can

minimize risks and still ensure progress toward a generally defined set of goals. These incremental decisions lend themselves to a stepwise process of environmental analysis referred to as *tiering*.

Tiering is the process of preparing multiple levels of environmental review, typically addressing general matters in a large-scale EA or EIS (e.g., national program statements) with subsequent smaller-scale EAs or EISs (e.g., regional or installation-specific program statements). The smaller-scale EAs or EISs often incorporate the general discussions included in the broader analysis by reference and concentrate on the issues specific to the site or particular phases of the program, thereby avoiding duplication of paperwork. (See CEQ *Guidance Regarding NEPA Regulations*, Appendix E in this handbook, for further discussion on tiering.)

Tiering occurs when a proponent builds an analysis on an existing analysis that was prepared in anticipation of later, typically site-specific proposals. *Supplementation* occurs when a proponent updates an analysis because circumstances surrounding an original proposed action have changed. Both of these situations differ from *incorporation by reference*, which involves the use of any other analysis to support a new proposal.

Tiering is appropriate when the sequence is as follows:

- From a larger program (or plan or policy) EA or EIS to a smaller program (or plan or policy) EA or EIS that is more focused, of lesser scope, or more site- or action-specific.
- From an EA or EIS on a specific action at an early stage (such as concept plan or site selection) to a subsequent EA or EIS on that action at a later stage (such as site-specific project design).

If environmental analyses are tiered, decision makers can focus on making environmentally informed decisions on only those issues that are "ripe" for decision making (40 CFR 1502.20). Other benefits of tiering include the following:

- Early identification of potential "show-stopping" issues.
- More opportunities to recognize and deal with controversial issues earlier in the decision-making process.
- More time and management options for developing solutions or mitigation measures to prevent unnecessary environmental damage.

1.6.8 Segmenting and Sequencing

CEQ regulations require that related or connected actions (actions with a common purpose, timing, effects, or location) be analyzed in a single document (40 CFR 1502.4(c) and 1508.25). Splitting an action into several smaller actions and analyzing them individually to avoid preparing a comprehensive environmental analysis is called *segmenting*. Segmenting is prohibited because the significance of the environmental effects of an action *as a whole* might not be evident if the action is broken into its component parts and the effects of those parts are analyzed separately. An example of segmenting would be to analyze separately the environmental effects of a small unit's field training during maneuvers when the intent of the overall action is to conduct a major field training exercise. Similarly, it would not be acceptable to analyze separately individual elements of an integrated natural resources management plan since the overall intent of implementing the plan is integrated management of all of an installation's natural resources on an ecosystem basis.

Certain "interim" actions, on the other hand, are a form of *sequencing*, which is permissible. Actions that meet all of the following conditions are considered sequencing rather than segmentation:

- The interim action does not prejudice the ultimate decision for the program.
- The interim action does not produce an irreversible or irretrievable commitment of resources.
- The interim action is consistent with the reasonable alternatives being considered as part of the broader NEPA analysis.
- The interim action itself is covered by another NEPA analysis.
- The broader NEPA analysis evaluates the cumulative effects of the action.

Proposed interim actions must also be reviewed and the appropriate level of NEPA analysis and documentation applied (e.g., REC/CX, EA/FNSI). Interim actions that are prohibited as segmentation include any that would involve an irreversible or irretrievable commitment of resources or the foreclosure of future options.

1.7 NEPA Training Courses and Information Available to the ARNG

Additional in-depth NEPA training might be appropriate for some ARNG staff responsible for program implementation. NEPA training available to ARNG staff is described below. Interested persons should contact the Environmental Training Officer, Conservation Branch Chief, or NEPA Team Leader at the NGB-ARE.

Training in NEPA is available through the Army Logistics Management College (ALMC) at Fort Lee, Virginia. An interservice NEPA course called "National Environmental Policy Act Implementation" is offered through ALMC's Environmental Management Department. The point of contact for this course is Mr. H. Steven Grisham; phone (804) 765-4731 or DSN 539-4731.

Using NGB and contractor support, Duke University in Durham, North Carolina, provides semiannual, university-level training to the ARNG in the development and writing of NEPA documents. This 1-week, for-credit course trains ARNG students from around the country, the Commonwealth of Puerto Rico, the U.S. Virgin Islands, and the trust territories in the preparation of EAs and EISs and the proper application of CXs. Students bring "real world" proposed actions to the course and, through a series of lectures and practical exercises, develop the detailed outlines and text of the appropriate documents.

Another source of NEPA training available to ARNG staff is the exportable training course offered through the U.S. Army Environmental Awareness Resource Center (AEARC) at Huntsville, Alabama. The course material, the *U.S. Army National Environmental Policy Act (NEPA) and Military Training* handbook and supplemental training video, is available by calling the AEARC at (205) 895-7408 or DSN 760-7408.

A number of educational institutions and organizations offer other academic and professional development NEPA courses. Related to public involvement as an internal part of the NEPA process, the NGB Public Affairs Environmental Office also sponsors level 6 and 10 training courses in risk communication.

The following relevant publications also are available:

- Bass, R.E., and A.I. Herson. 1993. *Mastering NEPA: A Step-by-Step Approach.* Solano Press Books, Point Arena, CA.
- Canter, L.W. 1996. *Environmental Impact Assessment,* 2nd ed. McGraw-Hill, New York.
- Clark, R., and L. Canter, eds. 1997. *Environmental Policy and NEPA—Past, Present, and Future*. St. Lucie Press, Boca Raton, FL.
- Fittipaldi, J.J., and E.W. Novak, 1980. *Guidelines for Review of EA/EIS Documents*. USACERL TR-N-92.
- Fittipaldi, J. 1982. *Procedures for Environmental Impact Analysis and Planning*. USACERL TR-N-130.
- Freeman, L.H. 1992. *How to Write Quality EISs and EAs—Guidelines for NEPA Documents*. Shipley Associates, Bountiful, UT.
- Jain, R., et. al. 1993. *Environmental Assessment.* McGraw-Hill, New York.
- Mandelker, D.R. 1992. *NEPA Law and Litigation*. Clark Boardman Callaghan, New York. (Includes annual supplements).
- Marriott, B. 1997. *Environmental Impact Assessment—A Practical Guide*. McGraw-Hill, New York.

2.0 ROLES AND RESPONSIBILITIES

Developing and executing a NEPA analysis might require the participation of a number of staff and command elements within the ARNG. Participants must understand their responsibilities, and all must function as a team by maintaining a high degree of communication, interaction, and coordination, particularly when these responsibilities involve providing timely information, concurrence, or approval within an individual's or organization's area of responsibility. This section describes typical roles and responsibilities of the ARNG, the NGB, and other participants. For a step-by-step discussion on participant involvement during the review, processing, and approval of EAs and EISs, refer to Section 9 of this handbook.

2.1 Proponents

2.1.1 Proponent Identification

The NEPA process includes a variety of critical roles and responsibilities. Identifying the proponent for the action is usually the first encountered. Typically, the NEPA process begins when the proponent, the person or staff element responsible for planning and implementing an action, identifies a proposal for meeting a specific mission-related need. The proponent may be an ARNG, Army, other DoD military service, or other non-DoD agency, or a state or local organization or person responsible for developing the specific plan of action. The proponent is sometimes not the only, or even primary decision maker on a proposed action. Many proposed actions require approval or concurrence of the leadership at many levels, depending on command and installation procedures and policies, as well as the scope of the action. It is the federal decision maker who serves as the signer of the final NEPA document. All actions must include NGB coordination; if a FNSI is prepared for an EA, NGB signature on the FNSI is also required.

The proponent for federally funded ARNG actions is the NGB division in whose area of responsibility the action rests. The NGB division performs the procedures required in the environmental process with the states or territories affected by the proposed action. Thus, the proponent for proposed training activities would be the NGB Operations Division, and for proposed construction activities, it would be the NGB Installations Division. Sometimes a broad program-type action by the NGB will affect several state ARNG organizations, in which case the responsible NGB division is the proponent. ARNG actions, such as military construction, training events, equipment fielding, and real property acquisition, are, in some cases, authorized, supported, or directed by a higher headquarters. An action directed by a higher headquarters does not necessarily constitute proponency. The proponent may be identified as the group or agency having the greatest influence on the proposed action, requesting the implementation of the proposed action, or receiving the greatest benefit from the proposed action.

In many cases, however, the proponent can be an ARNG state-level agency or office. For example, proponents for ARNG actions may include a state ARNG proposing to implement a Master Plan, an Integrated Natural Resources Management Plan, or a new or expanded use for a local training area. For proponency responsibilities in Innovative Readiness Training projects, see Section 3.8.

In other cases, a non-ARNG agency may be the proponent for an action involving the ARNG. For example, the U.S. Air Force might be the proponent if it proposes to conduct aircraft operations over an ARNG-controlled range area. Likewise, should the Air National Guard propose to designate new airspace, such as a Military Operations Area (MOA) adjacent to an ARNG installation's restricted airspace area, the Air National Guard would likely be designated

as the proponent for creation of the MOA.

The state environmental office or NGB-ARE is seldom the proponent for an action, but these entities may support the proponent in conducting the NEPA analysis. Environmental staffs may coordinate NEPA analysis, advise the proponent, and assist in staffing the NEPA document, but the proponent is still responsible for providing critical information and data concerning the action and for overseeing preparation of the NEPA document.

NEPA is funded from the proponent's mission funds (generally not the environmental account) as an integral cost of the project. Activities such as equipment fielding, real estate actions, and new construction all require the proponent to identify and program early on funds to cover the entire NEPA process. The environmental staff is still responsible for ensuring technical sufficiency of the document and proper staffing and coordination is accomplished. Only for such projects that are directly related to an environmental activity, such as preparing Integrated Natural Resources Management Plans or Integrated Cultural Resources Management Plans, should environmental funds for NEPA be authorized.

Mitigation measures for reducing or offsetting potential adverse environmental impacts are normally identified during the NEPA process. Mitigation measures identified in either a FSNI supporting an EA or a ROD accompanying an EIS must be identified as a funding requirement to include funds necessary to monitor mitigation impact. Generally only mitigations that are not associated with a particular law or regulatory requirement should be requested using the NEPA Law/Reg category. All other requests should be categorized according to the appropriate law or regulatory driver for requiring a mitigation measure to ensure compliance as a proposed activity is implemented.

2.1.2 Responsibilities of the Proponent

The proponent is responsible for the overall NEPA compliance associated with the proposed action, which includes preparing and distributing documentation, collecting data through surveys and other special studies (e.g., noise and air emissions measurement and environmental baseline surveys), meeting any public involvement requirements, and funding *all* of the associated costs. The proponent is also responsible for the content, accuracy, quality, and conclusions of the NEPA analysis.

The proponent must clearly define the proposed action, all reasonable alternatives (including the possibility of taking no action), and the underlying purpose of and need for the action; staff the documents through the review and approval process; ensure that all review comments are incorporated; and sometimes make the final decision. The proponent is then responsible for the implementation and sustainment of the proposed action, as well as any potential impacts related to the action. The proponent also funds and undertakes any mitigation measures committed to in the NEPA document to reduce or compensate for environmental damage when it cannot be avoided. Mitigation commitments should be listed as line items (or the equivalent) in the proponent's budget for proposal implementation. The responsibilities described here remain with the proponent even if another organization or a contractor prepares the NEPA analysis and documentation.

The proponent's responsibilities may be broader when actions are proposed to occur outside ARNG installations. When working with other DoD components or agencies, it is important for the proponent to identify early on who is the responsible landowner, which set of NEPA implementing regulations (and format) will be used during document development, who is the

decision maker, and who will have signatory authority on the FNSI or ROD.

2.2 Key Participants

2.2.1 State ARNGs

State ARNG participation and coordination are central to the ARNG NEPA process. Because a state ARNG organization could serve as a proponent, as a contributing office, or merely as a reviewer, the state's level of participation might vary from situation to situation. In addition, each site at which an action requires NEPA analysis might have a slightly different group of responsible persons, and each group needs to know how to efficiently participate in its portion of the NEPA process. It is essential that the state ARNG communicate and coordinate with the NGB before initiating and throughout the NEPA process. When a state ARNG organization is the proponent, the NGB provides guidance and oversight to the state ARNG's NEPA process. Although internal state ARNG organizations vary, the general structure of NEPA responsibilities within state offices is as follows.

The Adjutant General. The Adjutant General (TAG), who reports to the state governor as well as the NGB, is the senior National Guard military official at the state level. The Adjutant General is responsible for ensuring that the purpose of and need for a proposed action originating with a state are well identified and communicated. When a proposed action is subject to NEPA, the Adjutant General is responsible for directing the appropriate state ARNG staffing of internal draft and final documents and ensuring that adequate NEPA analysis is prepared.

Environmental Program Manager. The Environmental Program Manager (EPM) (or state Environmental Manager/Specialist) is the designated point of contact for facilitating the environmental process at the state level. The representative acts on behalf of the installation and is responsible for ensuring that the ARNG satisfies all applicable environmental requirements. Although the Environmental Program Manager may act as a proponent for some projects involving natural resources management, his or her most important responsibilities are to ensure that other proponents recognize their responsibilities under NEPA and satisfy environmental documentation requirements and to ensure that mitigation commitments are carried out and monitored. The responsibilities of the Environmental Program Manager also include assisting in the preparation and staffing of the necessary environmental documentation, coordinating the NEPA process with the NGB, maintaining the administrative record, providing available technical information on existing environmental conditions on the installation, and informing the Staff Judge Advocate of the progress of the NEPA process.

Public Affairs Officer. The Public Affairs Officer (PAO) is the official spokesperson for the installation where the proposed action is to occur. It is not advisable for proponents or other installation staff to independently provide information to news media or the local community regarding official ARNG business. The Public Affairs Officer should establish and maintain liaison with The Adjutant General, the Environmental Program Manager, the Staff Judge Advocate, the NGB, the installation commander, the installation coordinator, and other installation offices with respect to public affairs issues. By maintaining liaison, the Public Affairs Officer can provide necessary public affairs guidance and can ensure compliance with required public affairs actions for the state ARNG's environmental program.

In support of NEPA actions, the Public Affairs Officer coordinates with proponents, The Adjutant General, the Environmental Program Manager, the Staff Judge Advocate, and the NGB Public Affairs Environmental Office in preparing press releases, public notices, decision documents,

reports, and other information. The Public Affairs Officer also handles the dissemination of such information to local media, local officials, and citizen groups. The offices should work together closely to ensure that all information released to the public is accurate, appropriate, and timely. To make sure information is easily understood by the public, the Public Affairs Officer should review all draft technical documents. If necessary, the Public Affairs Officer may direct questions to or seek advice from the NGB. The Public Affairs Officer should maintain a record of all news releases, public meetings or briefings held, queries answered, and coverage in print media, as well as summaries of transcripts of electronic media reports. Copies of news clippings should be submitted directly to the NGB Public Affairs Environmental Office.

The Public Affairs Officer is responsible for coordinating with the NGB Public Affairs Environmental Office to plan and conduct any public meetings or hearings for the installation. He or she is responsible for responding to queries from the public and news media about project and public meeting information. Replies to queries should be prompt (1 day) because delay might be perceived as a lack of concern on the part of the ARNG. If a complete answer is not immediately available, an interim response should be supplied until a satisfactory answer can be given (within 1 week). The Public Affairs Officer should coordinate all queries with the NGB Public Affairs Environmental Office. Sometimes the NGB designates the Public Affairs Officer as the point of contact for the receipt of comments on NEPA documents.

Staff Judge Advocate. Legal counsel from the Staff Judge Advocate (SJA) is responsible for reviewing all NEPA documents and advising staff on legal issues. State environmental program specialists may request that the Staff Judge Advocate office provide a legal review of the NEPA documents prior to review by the NGB Office of Chief Counsel. This office supports the ARNG in discussions with other government agencies or private interests concerning compliance with NEPA.

Other State ARNG Offices. Other state offices might be required to provide review and comment on NEPA documents. Generally, an office becomes involved when the NEPA action relates to its responsibilities as an office. For example, the Aviation Office would be included in the NEPA process for a proposed action involving airspace use. Other state ARNG offices that might be required to review and comment include the Command Logistics Office (CLO), Construction and Facilities Management Office (CFMO), Force Integration Readiness Office (FIRO), Plans, Operations and Training Office (POTO) or Office of the Deputy Chief of Staff for Operations (ODCSOPS), and Military Personnel Office. As necessary and appropriate, any other offices not previously discussed should assist proponents in the early identification of environmental issues related to their respective functional areas. In addition, they should also apprise the Environmental Program Manager of any potential environmental compliance problems. Depending on project requirements, other state offices might also need to participate in the implementation and/or monitoring of certain mitigation measures.

2.2.2 National Guard Bureau

The key to successful processing of environmental documents is establishing and maintaining a chain of command for all steps in the analysis and document preparation process. For a NEPA analysis, the proponent (the entity requiring the action) is in charge. In some cases, the NGB could be the proponent; in others, the NGB could be a contributing office and a reviewer. Regardless of the type of action, a formal procedure should be established to ensure each entity is aware of what the others are doing throughout the long process.

The NGB maintains the expertise to ensure that all ARNG NEPA documentation is completed in

a professional, timely, and reasonable manner. As the proponent below HQDA level, the NGB is responsible for the environmental analysis and documentation "from cradle to grave." The NGB must ensure adherence to the approved environmental analysis and documentation schedule through close coordination and clear communication with all participants.

The NGB, as the executive agent of DoD for all matters pertaining to the ARNG, is responsible for review of ARNG NEPA documents. Normal NGB staffing of an EA or EIS includes the offices described in the paragraphs that follow.

Deputy Director. The Deputy Director has overall authority in approving and executing EAs/FNSIs and in providing NGB-level approval of EISs/RODs on behalf of the ARNG. The Deputy Director may also delegate approval authority for EAs and EISs to another appropriate federal official.

Director of Environmental Programs. The Director of Environmental Programs is responsible for the effective and efficient performance of the Environmental Programs Division (ARE; see below). In 2000 the Deputy Director delegated authority to approve and execute EAs and FNSIs to the Director of Environmental Programs.

Environmental Programs Division (ARE). The action office for the NGB NEPA process is usually the ARE. This office provides guidance and monitoring for the planning and development of NEPA documents at the state level. NEPA documents prepared at the state level are staffed through NGB under the direction of this office. When NEPA documents are prepared at the NGB level, the ARE oversees their preparation and coordinates the staffing and review process of the documents within NGB. This office may also assist in ensuring funding is made available for the NEPA process and in providing contractor support, as needed, for preparing NEPA documents.

Office of Chief Counsel. Legal counsel from the NGB Office of Chief Counsel is responsible for advising staff on legal issues and reviewing all NEPA documents for adequacy and legal sufficiency. The purpose of the legal sufficiency review is to ensure that all legal issues of the NEPA process have been addressed. A legally sufficient document is one that procedurally complies with CEQ, Army, and ARNG regulations and published policies, and identifies and analyzes all relevant issues and conditions. A legally sufficient NEPA document must accomplish the two goals of NEPA—to provide for informed decision making by the federal agency and to disclose to the public the environmental effects of the proposed action and alternatives. Legal counsel must ensure that the document clearly identifies and analyzes the proposed action; reasonable alternatives; effects associated with the proposed action and alternatives, including cumulative effects; and means to avoid or minimize adverse effects (mitigation measures).

The Office of Chief Counsel also interprets NEPA and CEQ regulations and provides information on which agencies have legal jurisdiction over the proposed action or have special expertise. Specific legal issues, such as compliance with the Clean Air Act, the Endangered Species Act, and other statutes and regulations, should also be addressed in coordination with and using guidance provided by the Office of Chief Counsel.

Public Affairs Environmental Office. The NGB Public Affairs Environmental Office speaks officially for the NGB. It is not advisable for proponents or other NGB staff to independently provide information to news media or the local community regarding official NGB business. The responsibilities of the Public Affairs Environmental Office differ, depending on whether the NGB

is the proponent.

When NGB is the proponent, the Public Affairs Environmental Office is directly involved in managing public affairs related to the NEPA process. In this case, the Public Affairs Environmental Office plays a role similar to that of the Public Affairs Officer at the state level, as outlined in Section 2.2.1. The NGB might delegate some responsibilities to state ARNG representatives, such as communication with local communities and media, but the overall responsibility will still belong to the NGB.

When a state ARNG is the proponent, the Public Affairs Environmental Office performs more of an oversight and guidance role with respect to public involvement issues. The Public Affairs Environmental Office is required to maintain liaison with the Public Affairs Officer, The Adjutant General, the Environmental Program Manager, the Staff Judge Advocate, and other NGB offices. In support of NEPA actions, the Public Affairs Environmental Office assists the Public Affairs Officer in preparing press releases, public notices, and other information. The Public Affairs Environmental Office provides guidance for the planning, coordination, and conduct of any public meetings or hearings for the state ARNG. The Public Affairs Environmental Office supports the Public Affairs Officer during the NEPA process and reviews all NEPA documents. When an EIS is necessary, the Public Affairs Environmental Office assists in the development and review of the Public Affairs Plan prepared before an NOI is issued.

Other NGB Offices. Other NGB offices may be required to provide review and comment on ARNG NEPA documents. Typically, an office becomes involved when the NEPA action relates to its responsibilities as an office. For example, the Force Integration Division is included in the NEPA process for a proposed action that involves Army force structure changes. Other NGB offices that might be required to review and comment include the Operations Division, Personnel Division, and Aviation Division. As necessary and appropriate, any other offices not previously discussed should assist proponents in the early identification of environmental issues related to their respective functional areas. In addition, they should apprise the ARE of any potential environmental compliance problems associated with an action.

2.2.3 Headquarters, Department of the Army

Headquarters, Department of the Army (HQDA) is the executive element of the Department of the Army. As the highest level headquarters in the Army, HQDA exercises directive and supervisory control over all other levels. In the broadest context, HQDA is composed of the Office of the Secretary of the Army; Office of the Chief of Staff, Army; the Army Staff; and specifically designated staff support agencies.

HQDA becomes involved in the ARNG NEPA process only if an EIS is required or, in rare instances, when an EA involves an action of national significance. The NGB-ARE is responsible for coordinating the NEPA process with HQDA as necessary. The following HQDA offices are typically involved in the NEPA process; as necessary, other HQDA offices might be required to provide review and comment on ARNG EAs and EISs:

- Deputy Assistant Secretary of the Army for Environmental, Safety, and Occupational Health, or DASA (ESOH).
- Deputy Chief of Staff for Operations and Plans, or ODCSOPS.
- Office of the Directorate of Environmental Programs, or ODEP.
- Office of the Chief of Public Affairs, or OPA.

- The Surgeon General.
- The Judge Advocate General - Environmental Law Division.
- Office of General Counsel.
- Office of the Congressional Legislative Liaison, or OCLL.

2.2.4 Lead and Cooperating Agencies

The preparation of ARNG NEPA analyses can require assistance from a number of contributing agencies. If more than one federal agency proposes or is involved in the same action, or is involved in a group of actions directly related to each other, a "lead agency" must be designated with primary responsibility for preparation of the NEPA document. The following factors are used to determine lead agency designation: (1) magnitude of the agency's involvement, (2) approval or disapproval authority over the proposed action, (3) expertise with respect to environmental effects, (4) duration of the agency's involvement, and (5) sequence of the agency's involvement. Further discussion on lead agency designation is provided in 40 CFR 1501.5 (see Appendix B in this handbook).

In cases where other federal agencies have special expertise, specific interests, or legal jurisdiction with respect to a proposed action and the resulting environmental effects, they may act as "cooperating agencies" at the invitation of the proponent or lead agency. The participation of cooperating agencies must be requested as early as possible in the NEPA process. Cooperating agencies must participate in the scoping process and, by request from the lead agency, support the analysis and preparation of the NEPA document. In addition, cooperating agencies might have their own regulations or requirements that must be met or considered. Examples of other federal agencies that might serve as cooperating agencies are other DoD services, U.S. Fish and Wildlife Service, National Marine Fisheries Service, Bureau of Land Management, Bureau of Reclamation, and U.S. Forest Service. Similarly qualified state or local agencies, including tribal historic preservation officers, may also serve as cooperating agencies. A federally recognized Indian tribe may, by agreement with the lead agency, become a cooperating agency if the action is proposed to occur on a reservation. Specific requirements and other responsibilities for a cooperating agency can be found in 40 CFR 1501.6.

For situations where state ARNG actions are proposed to occur on another agency's property, the proponent for the action might need to obtain permission or concurrence from the agency before implementing the action. The land-holding agency, in this case, might want formal recognition in the NEPA document and/or might want to serve as a cooperating agency. The land-holding or cooperating agency may participate in decisions, review of the document, and concurrence on the NEPA process. In some cases, the land-holding agency might require signatory authority on the decision document (FNSI or ROD). In those cases, the federal decision maker, or NGB official, would sign the FNSI/ROD deciding on the implementation of the proposed action and the land-holding agency would sign as a concurring official acknowledging the action and its proposed location. Land-holding agencies with which an NGB proponent might need to cooperate might include the Air Force and the Navy. Some examples of other federal landowners that require notification and concurrence on a proposed action occurring on their property include the Bureau of Land Management and the U.S. Forest Service.

In some cases where proposed state ARNG actions are to occur on another federal agency's property, that agency may require that its own NEPA implementing regulations be used to conduct the analysis and documentation for the ARNG's actions. It is NGB-ARE's preference, however, to follow the ARNG's NEPA process and regulations for all ARNG actions where

NEPA applies. Early coordination between the ARE and state ARNG staff, and the other federal agency, is necessary in such cases to determine which agency will serve as the lead or cooperating agency. Ensuring effective and timely cooperation and coordination between agencies in this situation might necessitate a written "charter" to formalize each agency's responsibilities.

2.3 Other Participants

2.3.1 Federal, State, and Local Agencies

All DEISs and FEISs are filed with the U.S. Environmental Protection Agency (EPA) in accordance with CEQ regulations (40 CFR 1506.9). In accordance with Section 309 of the Clean Air Act (Title 42 of the *United States Code* [U.S.C.], Section 7609), EPA is also given authority to review and comment on EISs and notify proponents of any deficiencies. EPA publishes the availability of EISs and its findings on document reviews in the *Federal Register* on a weekly basis.

NEPA requires that proponents consult early with other federal, state, and local agencies that have jurisdiction by law over some aspect of a proposed action or can provide special expertise during the NEPA process. Examples include consulting with the U.S. Fish and Wildlife Service on endangered species habitat; with the State Historic Preservation Office regarding historic structures; and with other state environmental agencies on air quality, hazardous and solid waste management, floodplains, and wetlands. Federally recognized Indian tribes also fall into this category. Several examples of ARNG coordination letters sent to outside agencies are provided in Appendix K.

2.3.2 Organizations and Individuals

For proposed actions, the federal government is required to consult with interested private individuals and organizations during the NEPA process when their involvement is reasonably foreseeable. An example of this would be a proposal to conduct field training on land adjacent to private property or to cross private property to reach training lands. Private individuals and organizations can also be a source of valuable information or expertise on particular sites or subject matter. Such individuals and organizations are often identified during the scoping process.

3.0 NEPA INTERFACE WITH SELECTED ARNG PROGRAMS AND ACTIONS

The ARNG conducts a variety of programs, actions, and activities that often require special or unique application of the NEPA process. Included in these are the preparation of Real Property Master Plans (RPMPs); real property acquisition, granting use, and disposal; military construction, and base operations and maintenance; equipment modernization; military field training; force structure management and stationing; the preparation of environmental management plans; and Innovative Readiness Training. The ARNG also may be involved in actions classified for reasons of national security, deployments for operations conducted outside the United States, emergency actions, and actions exempt in whole or in part from NEPA's procedural requirements. This section describes these categories of actions, the applicability of NEPA, and special requirements for applying the NEPA process to them. It also describes the applicability and unique requirements of other related statutes and regulations involved in the assessment of potential environmental effects resulting from ARNG deployments conducted outside the United States, its territories, and its possessions.

3.1 Real Property Master Planning

3.1.1 Applicability of NEPA to Master Planning

Real property master planning within the ARNG adheres to the requirements and guidance contained in AR 210-20 (*Master Planning for Army Installations*).

The level of environmental review pursuant to NEPA that is appropriate to installation planning depends largely on the type of master plan to be developed (programmatic or detailed) and the level of planning (statewide or facility-specific). Appropriate NEPA analysis can be developed for either type of plan or planning level once decisions on the structure of the planning processes are made. Timing is the critical element. Plan implementation cannot properly begin until the environmental consequences of proposed actions have been appropriately analyzed. With a programmatic EA in place, most facilities projects should be able to be "tiered" to a REC or assessed for site-specific effects in a focused EA. Given the current state level orientation of the ARNG planning process, a suggested efficient and cost-effective approach to NEPA analysis is for a generic assessment of effects at the program level (see Section 1.6.4) followed as necessary by

- Tiering to a REC or, if necessary,
- Tiering to a focused site-specific EA, and
- Performing a detailed analysis of site-specific alternatives in an EIS only for complex projects where significant impacts or controversy could be expected.

3.2 Federal Real Property Acquisition, Granting Use, and Disposal

Federal real property transactions require considerable attention to safeguard all relevant ARNG interests. At one level, ARNG personnel must ensure that interests in federal real property are properly recorded. At another level, ARNG personnel must ensure that uses of federal real property are consistent with environmental values and comply with the universe of statutes and regulations applicable to ARNG federal activities.

The U.S. Army Corps of Engineers' *Real Estate Handbook* (ER 405-1-12) provides valuable information on the preparation of and requirements for real property reports and acquisition

planning reports, as well as other topics related to federal real property transactions. The handbook also provides detailed information on the environmental documentation required for federal real property transactions.

Planning Resources for Infrastructure Development and Evaluation *(PRIDE*), a personal computer relational database application program, provides an automated tool to manage real property inventories, building information schedules, general ledger account code reports, and other matters at Army and ARNG installations. It is a user-friendly system for accumulating and reporting real property data, and it improves the user's ability to monitor and report real property use and assignment, and the capitalization of facilities on an installation. Information stored in the database system can be a valuable asset for preparing NEPA analysis and documentation.

To help real estate professionals, proponents, and environmental personnel execute their responsibilities related to real property, the NGB has developed its *National Guard Bureau – Army National Guard Real Estate Manual for Federal Property* (July 1998) to provide advice and instruction on various ARNG real property transaction processes and procedures. The manual provides succinct, detailed information needed to successfully participate in, and comply with, these processes and procedures at all levels. The manual describes what must be accomplished to execute a real property transaction and provides step-by-step guidance on how to prepare the required documentation. In addition to the normal array of topics associated with real estate processes and procedures, the manual includes specific information on base realignment and closure (BRAC) actions, focusing on the ARNG perspective of receiving licenses to operate active component properties being closed.

3.2.1 Applicability of NEPA to Federal Real Property Acquisition, Granting Use, and Disposal

NEPA applies to proposed actions involving acquisition, granting use, and disposal of federally supported real property, which are described below:

- Acquisition of interests in federal real property includes purchase, condemnation, donation, transfer (from another federal agency), withdrawal (of federal lands), recapture, and leasing. Fee interests are permanent. Permits, licenses, leaseholds, and options are temporary interests. Easements may be permanent or temporary.
- Granting use of real estate includes transactions such as leases, licenses, permits, easements, and consents. In some instances, a Report of Availability precedes a grant of use of federal real property by the ARNG.
- Disposal actions include transfer to another agency, sale to the public, negotiated sale to a state or local government body, demolition, donation to a public body, relinquishment of use of public domain lands, and abandonment in place.

Mere transfer of title or interest in real property does not, in and of itself, cause environmental effects. Rather, it is the use to which newly acquired property might be put that must be the focus of NEPA analysis. When the ARNG acquires title to or obtains an interest in federal real property, or when the ARNG grants use of federal real property to another entity, NEPA analysis must identify the types of activities proposed and their direct, indirect, and cumulative environmental effects. As a general rule, when the ARNG disposes of federal real property, analysis of potential environmental effects is the responsibility of the transferee or the proponent of future activities on the property.

3.2.2 References to NEPA in Federal Real Property Acquisition, Granting Use, and Disposal Guidance

Three directives specifically pertain to acquisition, granting use, and disposal of federal real property by the ARNG:

- AR 405-10, *Acquisition of Real Property and Interests Therein*. This directive, issued in 1970, amended in 1974, and under revision in 1997, sets forth the authority, policy, responsibility, and procedures for the acquisition of real property and interests therein for military purposes by the Army and the ARNG. AR 405-10 does not specifically task the preparation of NEPA documentation in conjunction with acquisition of property and interests therein. Its silence concerning NEPA obligations is likely due to the fact that the CEQ regulations were promulgated in 1978, after AR 405-10 was issued. AR 200-2, however, requires preparation of NEPA documentation for "projects," a term that would encompass actions to acquire real property interests.
- AR 405-80, *Granting Use of Real Estate*. This directive establishes policies for granting use of real property and provides specific guidance for leases, licenses, easements, and permits. It also serves as the source of instruction for preparation of the Report of Availability of property for non-Army use. Section 2-13 (Environmental Factors) provides that the Army will not authorize the use of real estate, water, and other natural resources when the use conflicts with the goals and intent of NEPA and other specified legislation. The directive also mandates that an EA is to be prepared with each Report of Availability (see Section 4-1(i) of the regulation). An EIS would be necessary if the proposed action would significantly affect the quality of the human environment, was highly controversial, or was expected to evoke litigation based on environmental issues.
- AR 405-90, *Disposal of Real Estate*. This directive sets forth authorities, responsibilities, policies, and procedures for disposal of military and industrial real estate under the custody and control of the Army worldwide. Section 1-6 (Special Considerations) mandates that all actions associated with real estate disposal will comply with environmental, historical, and cultural protection requirements in AR 200-2 and other specified directives. Ensuring compliance might require consultation in accordance with Section 106 of the National Historic Preservation Act (see Section 8.6). Furthermore, actions in coastal states must be consistent with coastal zone management plans to the maximum extent practicable, and actions in floodplains and wetlands must comply with Executive Orders 11988 (*Floodplain Management*) and 11990 (*Protection of Wetlands*).

3.2.3 Suggestions for Preparing NEPA Analyses Involving Federal Real Property Acquisition, Granting Use, and Disposal

A Real Property Specialist must ensure that all actions relating to real property and real property transactions are performed within all federal, state, and local environmental program guidelines.

NEPA compliance related to federal real property transactions is obtained in the same manner as compliance for other major federal actions having a significant effect on the quality of the human environment. A proponent for a federal real property transaction may rely on a ROD prepared in conjunction with an EIS, a FNSI prepared for an EA, or a REC based on one of the CXs listed in AR 200-2. Some evaluations or measures must precede decision making in a ROD, FNSI, or REC:

- NEPA documentation must be prepared prior to final action on a Report of Availability (which underlies granting use of federal real property).

- As specified in Section 15-6 of AR 200-1, it is Army policy to prepare an Environmental Baseline Survey (EBS) to determine the environmental condition of properties being considered for federal acquisition, outgrants, and disposal. Reassignments within Army easements, licenses, and permits do not require an EBS; however, one may be generated in extraordinary circumstances. The EBS is used to identify the potential environmental liabilities associated with federal real property transactions. The NGB encourages the development of an EBS on all real property transactions. States may also require a document similar to an EBS for state or local real property transactions. In accordance with Section 15-6(d) of AR 200-1, pertinent information contained in an EBS will be incorporated by reference or as actual text into the appropriate NEPA document.[6]
- A Finding of Suitability to Lease (FOSL) and a Finding of Suitability to Transfer (FOST) are documents used to record specific determinations related to hazardous waste and other types of contamination that might be present on federal property intended for disposal or grant of use. Like the EBS on which they are based, both the FOSL and FOST are subject to federal and state regulatory agency review before completion. Refer to Section 15-6 of AR 200-1 for information on application and processing of the FOSL and FOST.

Some federal real property transactions do not require detailed NEPA analysis (see AR 200-2 for a listing of CXs). For example, if an ARNG transaction of federal real property is consistent with an existing land-use plan that has been environmentally assessed, or if the transaction is between federal agencies and will result in no significant land use changes, a CX may be used to achieve compliance with NEPA. AR 200-2 should always be consulted to determine whether a REC is required to document the use of a CX for a particular action.

Two areas warrant particular attention when performing NEPA analysis of acquisition, granting use, or disposal of federal real property interests. First, accuracy in the description of real property interests is absolutely essential. When describing interests that may be acquired or disposed of, care must be taken to correctly identify the type of interest (e.g., fee, leasehold), property description (areal extent), and duration. For easements, it is necessary to identify the most influential and useful properties, as well as the duration of the grant. In cases involving property adjoining a river, caution must be taken to identify any interests held in or proposed for submerged lands; permit authorization for actions affecting or occurring in such submerged lands might reside in another agency or the state. The second area of attention is that some types of real property transactions permit, encourage, or rely on the preparation of NEPA documentation by future property users. This is especially the case where the ARNG is in a position to approve a leasehold, license, or permit authorizing another entity's proposed action. When NEPA documentation is prepared by an entity other than the ARNG, it remains incumbent on the ARNG to ensure the sufficiency of the documentation to support whatever decisions are ultimately reached.

3.3 Military Construction/Operations and Maintenance

Military construction can be described in several categories—facility maintenance and repair, minor construction, emergency construction, replacement of facilities damaged or destroyed,

[6] An EBS is highly useful as an informational resource for preparing NEPA documents. Proponents are cautioned that an EBS is not a NEPA document and that it is not appropriate to rely solely on an EBS for decision making on proposed actions.

unspecified minor military construction Army (UMI), and major construction (MILCON). MILCON for the ARNG is referred to as Military Construction, Army National Guard (MCARNG). MCARNG is defined as the erection, installation, or assembly of a new facility; the acquisition, expansion, extension, alteration, conversion, or replacement of an existing facility; the relocation of a facility from one installation to another; and installed equipment made a part of the facility, related site preparation, excavation, filling, landscaping, or other land improvements.[7] MILCON funds are appropriated through Congress for 5 years but authorized for 3 years from the year in which they are appropriated.

3.3.1 Applicability of NEPA to Military Construction/Operations and Maintenance

ARNG actions falling within this category are major actions the ARNG undertakes that usually have the potential to affect the environment. Construction projects often cause a variety of effects on air quality, noise levels, water resources, biological resources, and cultural resources. NEPA should be appropriately integrated into the decision-making process for new construction and for operations and maintenance activities. ARNG military construction funds may not be used for preparing environmental documents. Operations and maintenance or other operating funds are the proper sources for funding the preparation of environmental documents associated with proposed ARNG military construction projects.

3.3.2 References to NEPA in Military Construction Guidance

Routine maintenance and repair actions, including those involving some minor construction activity, are categorically excluded from more detailed analysis (see AR 200-2). Construction that does not alter land use can also be categorically excluded, but a REC must be prepared. Screening criteria must be applied and exceptional circumstances reviewed before CXs may be used for any military construction project. The ARNG checklist must also be applied (see Section 5.2 and Appendix L). These precautions would especially be true of UMI construction because it would generally involve new construction and possibly be classified as major construction (MCARNG). NEPA documentation procedures are described in paragraph 5-4 of National Guard Regulation (NGR) (AR) 420-10 for projects that are wholly or largely classified as UMI/MCARNG.

NEPA requirements and documentation procedures for MILCON are described in paragraph 3-3 of NGR (AR) 415-5, *Military Construction, Army National Guard (MCARNG) Project Development.* The NEPA process must be integrated early in the planning and decision-making process for a construction project. NGR (AR) 415-5 cites AR 200-2 as the guidance for preparing environmental analysis and documentation. Environmental documentation is required during the predesign stage of the construction project. Environmental documentation must accompany proposals throughout the ARNG review process, including the submission of construction approval documents, DD Forms 1390/91.

3.3.3 Suggestions for Preparing NEPA Analyses Involving Military Construction

NEPA Funding. Approval channels and funding thresholds vary for different types of construction. Additionally, a project can be state-funded or federally funded or have a

[7] A *facility* in this case is defined as any interest in land and/or armory or other type structure including storage buildings, or complex of structures together with any supporting road and utility improvements, normally needed for proper development, training, operation, and maintenance of ARNG units.

combination of funding sources. These differences can make NEPA decision making difficult. In accordance with paragraph 1-5(f) of NGR (AR) 415-10 (*Army National Guard Facilities Construction*), NEPA requirements must be met for all construction proposals involving federal funds. State funds should be used to comply with state environmental requirements, as applicable. In accordance with the Military Construction Codification Act (10 U.S.C. 2801 et seq.), the preparation of environmental documentation and associated investigations are considered advanced planning for projects and must be funded from other than MILCON funds. As previously discussed, operations and maintenance funds or other operating funds are the proper sources for funding NEPA analyses.

Schedule. A project may be constructed in several phases; however, the NEPA analysis must consider the entire project to prevent segmentation (see Section 1.6.8). The construction schedule can also be affected by the availability of funding. MILCON funding can often slip as a result of the congressional approval/appropriation process. This factor should be taken into consideration when analyzing the effects associated with the timing and duration of implementing the proposed action. This factor could be especially important when considering the cumulative effects of other construction projects on and in the vicinity of the installation.

Project Documentation. Evidence of appropriate NEPA analysis must accompany the DD Forms 1390/91 or NGB Form 420-R when a construction proposal is submitted and throughout the ARNG review and decision-making process. These forms also contain requirements for specific project information. Item 14 of DD Form 1390 requires entries on construction costs for addressing any air pollution, water pollution, or occupational safety and health shortfalls. In addition, the form's query for a Detailed Requirements Statement requires specific discussion concerning the Clean Air Act and protection of wetlands. DD Form 1391 also includes a Detailed Requirements Statement section that must contain a summary of environmental effects. The standard format for the Detailed Requirements Statement in DD Form 1391 is explained in Appendix F of NGR 415-5. Statements and declarations made on DD Form 1391 must be substantiated with appropriate environmental analysis and documentation. This is not a "boilerplate" document; entries must be critically evaluated and must accurately represent existing conditions. Completion of an ARNG environmental checklist can be a starting point for both meeting the information requirements of DD Forms 1390/91 and, if required, preparing an EA or EIS (see Section 5.2 and Appendix L in this handbook). When NGB Form 420-R is submitted for in-house approval by the U.S. Property and Fiscal Office, NEPA documents, as appropriate, should be included in the project file. A sample DD Form 1390/91 is shown in Appendix M.

12.400 Program. The state- and congressionally driven 12.400 program requires annual identification of ARNG facility shortfalls and the submission of appropriate NEPA documentation on proposed construction projects. The Adjutant General submits proposed projects, in accordance with DoD construction criteria guidelines, to the Chief of Installations at NGB in the ARNG Readiness Center in Arlington, Virginia. After Congress authorizes, approves, and appropriates funds for the project and the NGB reviews and approves all plans, specifications, bidding documents, contracts, and other documentation, the award can be made.

3.4 Equipment Modernization

The ARNG is charged with maintaining properly trained and equipped units available for prompt mobilization for war, for a national emergency, or as otherwise needed. This readiness requires that the ARNG have access to the most current technology. Modernization of the ARNG's field artillery units, aviation units, and associated training programs, ranges, and training areas is

crucial. Equipment modernization involves many different divisions and branches of the ARNG. The ARNG modernization program is designed to improve operational and strategic mobility, lethality, agility, survivability, and situational awareness through the use of advanced technology. Because technological improvements are constantly being developed, equipment upgrading is a continuous and necessary process for combat, combat support, and combat service support units. For instance, in the latter part of the 1990s, force structure changes affecting the ARNG reflected an increased reliance on ARNG combat support units to carry out the Army's missions.

In October 1999 the Secretary of the Army and Chief of Staff of the Army unveiled their vision for the opening decades of the 21st Century. This vision focuses on taking care of people, maintaining readiness, and transforming the Army into a force that is strategically responsive and dominant at every point on the spectrum of conflict. Transformation of the Army will result in a force that is more responsive, deployable, agile, versatile, lethal, survivable, and sustainable. To achieve these characteristics of the objective force, over a period of many years the Army will substantially alter the weapons systems, vehicles, and other equipment it relies on to carry out its mission. The ARNG should expect to see considerable activity in the equipment modernization arena.

Equipment fielding, an inherent part of the equipment modernization program, involves stationing of new or replacement equipment at various ARNG training sites. Fielding can include such activities as tank and other weapon system upgrades, and the stationing of new tactical wheeled vehicles. The need for continuous equipment modernization is often the reason for the fielding of new or different equipment. Equipment fielding supports the ARNG's need to maintain readiness, to develop proficiency in the use of new or improved weapons, and to integrate seamlessly with regular Army forces upon mobilization in the event of war.

3.4.1 Applicability of NEPA to Equipment Modernization

The fielding of new equipment must be analyzed in accordance with NEPA and its implementing regulations because using or maintaining the new or replacement equipment could result in environmental effects not associated with existing systems. The U.S. Army Environmental Center's *NEPA Manual for Materiel Acquisition* (November 2000) addresses NEPA considerations and sources of assistance in the deployment and operational support phases of the weapon system development and modernization process.

3.4.2 Reference to NEPA in Equipment Modernization, Materiel Acquisition, and Fielding Guidance

The DoD and Army publications listed below provide guidance for integrating environmental considerations into the materiel acquisition process:

- DoD Directive 5000.1, *Defense Acquisition.*
- DoD 5000.2-R, Mandatory Procedures for Major Defense Acquisition Programs (MDAPs) and Major Automated Information System (MAIS) Acquisition Programs.
- AR 70-1, Army Acquisition Policy.
- Department of the Army Pamphlet (DA PAM) 70-3, *Army Acquisition Procedures.*

The *NEPA Manual for Materiel Acquisition* provides details on NEPA compliance requirements and procedures.

3.4.3 Suggestions for Preparing NEPA Analyses Involving Equipment Modernization, Materiel Acquisition, and Fielding

Users should consult the *NEPA Manual for Materiel Acquisition* for specific guidance on applying NEPA to the materiel acquisition process. Prepared for members of the Army materiel acquisition community, the manual provides information for integrating the requirements of NEPA into the materiel acquisition process.

The NEPA considerations described below are focused specifically on the fielding aspects of the process, including ARNG equipment modernization programs.

- If the proposed action involves the fielding of equipment to multiple states and territories, a Programmatic Environmental Assessment (PEA) or Programmatic Environmental Impact Statement (PEIS) completed early in the equipment mobilization planning process might eliminate the need for stand-alone environmental reviews for each location at which equipment fielding is being planned (see Section 1.6.4). This document would ideally take the form of a supplement (PEA or PEIS) to the environmental analysis performed and updated during Phase I and Phase II of the materiel acquisition process. Programmatic fielding NEPA analyses may, however, require additional supplemental or follow-on (tiered) site-specific NEPA analyses (either EAs or EISs) if lack of information or program uncertainties do not permit adequate analysis of impacts at the affected locations.
- Proposed fielding actions might be associated with stationing proposals and/or real property master planning, land acquisition, training land management, new construction, or facility rehabilitation or modification. NEPA guidance on addressing these related types of actions is presented elsewhere in this section.
- If the proposed fielding involves modified or similar equipment, and if existing and up-to-date NEPA analyses and documentation address the environmental effects of the present equipment, the NEPA analysis for the proposed fielding should focus on any changes in equipment performance characteristics, maintenance procedures and materials, facility requirements (including ranges), and their associated environmental effects. Cumulative effects also must be considered.
- NEPA analysis for fielding actions is a problematic area for ARNG NEPA compliance. The shift in responsibilities for NEPA analysis from the "acquisition community" to the "facilities community" has historically created a "crack" through which many such handoffs have slipped. Installation environmental staff must work closely with force structure and stationing staff and installation master planners to ensure that all participants in the planning process can initiate required studies, including NEPA analyses, early in the materiel fielding planning process.
- Historically, new equipment has sometimes arrived at ARNG facilities before completion of the required NEPA analysis. Installation environmental staff should closely coordinate with affected units to ensure that modernization programs are not jeopardized by premature use of the new equipment in ways that could be considered an "irreversible or irretrievable commitment of resources" (see Section 7.7).

3.5 Military Training

To be effective, training must reflect the realism of combat and combat support for both small and large units. This requirement for realism results in the need for ARNG units to periodically use large natural areas, as well as urbanized terrain, for maneuver and range training. ARNG

training lands must be managed so as to be able to sustain training activities from both an operations and environmental standpoint. Integrated Training Area Management (ITAM) programs, Integrated Natural Resources Management Plans (INRMPs), and Integrated Cultural Resources Management Plans (ICRMPs) help provide the environmental framework on which to determine the effects of training on lands used by the Army and ARNG. Consideration of alternative training scenarios and application of ITAM lessen the effects of repeated training activities in the same areas and ensure both training and resource sustainability.

3.5.1 Applicability of NEPA to Military Training

Military training activities are subject to NEPA analysis. Appropriate NEPA analysis can help lessen the adverse effects of training.

Executing training to doctrinal standards to maintain the readiness of units affects the environment. To minimize the Army's (and ARNG's) impacts on land used for training activities, the ITAM program was developed to provide a balance between use of land for training and testing and the mandates of environmental stewardship and training area sustainability. Information collected for the ITAM program is often useful in preparing a NEPA analysis on proposed training-related actions. The ITAM process and NEPA require trainers and environmental staff to use a systematic team approach to mission planning and NEPA compliance. NEPA, as part of the planning process, can be used to identify the requirements of other environmental laws applicable to training land management and field training. NEPA also can be a proactive measure to ensure compliance with those laws while training is conducted. Cumulative effects analysis in training-related NEPA documents assists in determining temporary or long-term environmental impacts caused by training or training facilities. Trainers should consult with the environmental staff at their installation as soon as active planning begins for training activities to avoid unnecessary delays or unacceptable constraints on training realism and mission accomplishment.

In the ARNG, the Plans, Operations, and Training Officer is charged with initiating planning for training activities. This officer is responsible for ensuring that required NEPA analysis is completed and should coordinate with the installation environmental staff and others for assistance in performing the required NEPA reviews. Principal documents include Range Development Plans and the Range and Training Land Program.

3.5.2 References to NEPA in Military Training Guidance

NGR 25-5, *Army National Guard Training Areas*, requires that during the training site development process, environmental planning, and analysis are necessary after the need for a master plan for a training site has been determined. Action- or activity-specific environmental documentation may be required even if a training site master plan is not needed (see also Section 3.1.1).

Paragraph 1-10a(1) of AR 350-4 (*Integrated Training Area Management*) provides that NGB responsibility for the ITAM program resides with the Operations, Training, and Readiness Division (NGB-ARO). Paragraph 1-11B(14)(d) of the same directive levies on installations the responsibility to assess impacts of training on land use.

3.5.3 Suggestions for Preparing NEPA Analyses Involving Military Training

Unless adequately covered by other NEPA analyses, such as an RPMP EA/EIS or INRMP

EA/EIS, or categorically excluded by AR 200-2, proposed actions involving training land management (such as land or maneuver rights acquisition or range construction) or military field training such as major field exercises must be appropriately analyzed in an EA or EIS. Including a description of the nature and effects of ongoing training activities in the affected environment section of an RPMP or INRMP EA/EIS provides a useful platform for subsequent tiering to other EAs or EISs for similar actions. Baseline information collected in connection with EAs or EISs for land withdrawal actions or major field exercises likewise can facilitate the development of concise analyses for other proposed training land management and field training activities on an installation.

If the training proposal might lead to further uses of the training site, or if it is general in nature and applicable to an entire training program, a programmatic EA or EIS might be needed. An example of a programmatic environmental document for training-related activities is an EA for a 5-year training plan or an EA that evaluates environmental impacts of a proposed multiyear lease to use off-post land for training. See Section 1.6.4 for further discussion on programmatic NEPA analyses. To minimize the need for individual, detailed EAs for routine training activities, "generic" descriptions of various types of training activities conducted on an installation and their environmental effects could be made a part of the installations' RPMP.

Several types of training activities, such as classroom training and tactical exercises without troops, can be categorically excluded from further NEPA analysis. Refer to the list of CXs in AR 200-2 (Appendix F in this handbook) and Section 5.

3.6 Force Structure Management and Stationing

Changes in social, economic, environmental, and political trends, both nationally and internationally, create conditions requiring reanalysis of the National Military Strategy. The Army Long-Range Planning System (ALRPS) provides the senior Army leadership's strategic vision and Program Objective Memorandum (POM) long-range goals for a period of 10 to 20 years into the future. The Army Plan (TAP) provides Army and ARNG priorities and resource allocation guidance for the mid-range period. Elements of these planning processes include both force structure and base structure. Force structure addresses manpower and organizational issues and is reflected in the creation of and changes in Tables of Distribution and Allowances (TDAs) and Tables of Organization and Equipment (TOEs). Base structure addresses facility, training land, and environmental issues and requirements and is primarily reflected in the following plans and programs:

- Real Property Master Plan (RPMP)
- Land Use Requirements Studies (LURS)
- Range and Training Land Program (RTLP)
- Integrated Training Area Management (ITAM) programs
- Integrated Natural Resources Management Plan (INRMP)
- Integrated Cultural Resources Management Plan (ICRMP)

Force restructuring may result in the activation or deactivation of ARNG units or involve organizational realignments. Base restructuring can result in the addition of facilities to the ARNG inventory or can result in the need to close or realign ARNG facilities, with the associated relocation of units and reassignment of personnel.

Force structure planning and base structure planning are linked conceptually and functionally by planning for stationing. Army Regulation 5-18 (*Army Stationing and Installation Plan* [ASIP]) establishes a database used to forecast the projected force structure for planning and programming of real properties required to support personnel and activities. Army stationing strategies (ALRPS and TAP) provide the strategic framework for formulating stationing requirements and act as an operational blueprint for stationing forces and for defining the infrastructure required by the strategy. The ASIP establishes the foundation for master planning and base operations resource programming at ARNG installations.

This section addresses NEPA applications for actions associated with force structure management and stationing. Base structure planning and related actions and activities, including facility, training land, and environmental, cultural, and natural resource management actions, are addressed under other topics in this section. Base realignment and closure is covered in the Army's *Base Realignment and Closure Manual for Compliance With the National Environmental Policy Act* (September 1995).

3.6.1 Applicability of NEPA to Force Structure Management and Stationing

The development and modification of TDAs/TOEs and proposed reductions or realignments of civilian or military personnel that fall below the thresholds for reportable actions prescribed by AR 5-10 (*Stationing*) are categorically excluded from NEPA analysis (see AR 200-2). Other proposed changes in force structure, such as unit activations, deactivations, and realignments, must be appropriately analyzed and documented in accordance with AR 200-2. Stationing, therefore, not only is the functional link between proposed changes in force structure and base structure, but also, as reflected in the following quotation from paragraph 2-1(e) of AR 5-10, is often the trigger for the requirement to incorporate environmental considerations into force structure planning.

> Final Department of the Army approval of recommended stationing actions is dependent upon a comprehensive (NEPA) analysis of feasible stationing alternatives that properly balances operational requirements and environmental and resource impacts.

Environmental documentation must be included in the stationing notification package sent to the ARNG brigade and division for approval. The Chief of the NGB serves as the coordination office for ARNG stationing actions.

Stationing actions often also involve changes in equipment fielding and use. See Section 3.4 for the applicability of NEPA to ARNG equipment modernization programs.

3.6.2 References to NEPA in Force Structure Management and Stationing Guidance

AR 5-10 (*Stationing*) incorporates all aspects of NEPA, including consideration of alternatives (Sections 2-1 and 5-2); analysis and documentation (Section 5-6); cumulative effects analysis (Sections 1-7 and 3-10); carrying capacity or sustainability of training lands (Sections 2-2 and 5-2); and socioeconomic impact analysis and public involvement (Sections 5-4 and 5-5). The regulation also shows clearly the close relationship between—and the need to integrate—force structure management, stationing, and base structure management planning, including planning

for construction, necessitated by force structure and stationing proposals.[8]

3.6.3 Suggestions for Preparing NEPA Analyses Involving Force Structure Management and Stationing

The instructions for stationing documentation (Section 5 of AR 5-10) contain detailed guidance on integrating NEPA analyses into stationing packages. The need to appropriately consider the "cumulative effects" of stationing proposals and the "capability of training land to support training densities" (carrying capacity/environmental sustainability) must be a central feature of EAs/EISs prepared for realignments at "gaining" installations. See also Section 3.4 for guidance on preparing NEPA analyses for equipment fielding associated with ARNG equipment modernization programs.

Several force management actions are categorically excluded from NEPA analysis. The action is categorically excluded if the reduction or realignment of civilian and/or military personnel falls below the thresholds for reportable stationing actions as prescribed by AR 5-10 (i.e., the stationing decision threshold for the ARNG is a brigade or division); will not result in the abandonment of facilities or disruption of environmental, surety, or sanitation services; and will not otherwise require an EA or an EIS to implement. Preparation of a REC, however, is required. MTOE development, likewise, is a categorically excluded action (see Section 5).

3.7 Environmental Management Plans

Environmental management plans for ARNG installations typically include the following:

- Integrated Natural Resources Management Plan (INRMP)
- Integrated Cultural Resources Management Plan (ICRMP)
- Integrated Pest Management Plan
- Endangered Species Management Plan (ESMP)
- Integrated Training Area Management (ITAM)

These plans contain details on management goals, objectives, and proposed implementation measures for the stewardship of specific resources.[9] Army or ARNG regulations or other directives that prescribe the plans generally contain provisions for their periodic review and update and might contain guidance for coordination with outside agencies as well as with other installation planning and management functions.

3.7.1 Applicability of NEPA to Environmental Management Plans

The actions and activities associated with implementing ARNG environmental management plans are subject to environmental analysis in accordance with NEPA. CEQ regulations and AR 200-2 both strongly encourage incorporating appropriate environmental analysis into the plans themselves. NEPA analyses so incorporated must satisfactorily meet the procedural requirements

[8] To be more accurate, the reference in paragraph 5-1(e)(3) of AR 5-10 to "Ongoing Mission Environmental Analysis" should be to "information on RPMP and Contributory Plan environmental documentation."

[9] Other plans, such as Hazardous Waste Management Plans, Spill Contingency Plans, Fire Management Plans, and Erosion Control Plans, are generally not covered in separate Army or National Guard regulations containing plan-specific guidance relative to NEPA requirements.

contained in CEQ and Army regulations. An example format for a combined INRMP/EA is presented in Appendix N.

Separate but concurrent preparation of management plans and their associated NEPA analyses is another approach. It is obviously preferable to the preparation of separate and sequential documents but, like the latter approach, must avoid the inefficiencies and unnecessary costs of duplication of effort and delay.

3.7.2 References to NEPA in Environmental Management Plan Guidance

Table 3-1 provides references to NEPA requirements applicable to specific environmental management plans.

3.7.3 Suggestions for Preparing NEPA Analyses Involving Environmental Management Plans

The following paragraphs provide a summary of requirements and suggestions applicable to applying NEPA to environmental management plans.

Integrated Natural Resources Management Plan (INRMP). Actions associated with INRMP implementation must be assessed for their environmental effects. Section 2-2(b) of AR 200-3 states that "natural resources management plans should be incorporated into Installation Master Plans as a supplemental document, or 'component plan' according to AR 210-20 *(Master Planning for Army Installations*), to allow for consolidation in the installation master plan NEPA document." Otherwise, NEPA compliance for INRMP actions must be accomplished either during their initial development or when the major 5-year revision to the INRMP is conducted.

The EA/EIS prepared for an INRMP should be an appendix to the plan or integrated within it. If integrated, NEPA elements should be clearly discernible. At least two alternatives should be considered— "implement the plan" and "no action" (continue current management practices). Other management options considered in arriving at the recommendation presented in the plan (preferred alternative) should be described and the reasons for their not being adopted explained. Part I (Section 5.2) of *Guidelines to Prepare Integrated Natural Resources Management Plans for Army Installations and Activities* (April 1997), provided at Appendix O, suggests that where specific proposed management actions cannot be described, the NEPA document must establish some significance criteria that will guide future prescribed activities.

TABLE 3-1. NEPA GUIDANCE IN ENVIRONMENTAL MANAGEMENT PLAN REGULATIONS AND DIRECTIVES

Environmental Management Plan	NEPA References
Integrated Natural Resources Management Plan	Paragraph 2-2 of AR 200-3; Part I (Section 5) of *Guidelines to Prepare Integrated Natural Resources Management Plans for Army Installations and Activities* (April 1997)
Integrated Cultural Resources Management Plan	Paragraph 4-1 of AR 200-4; Section 2-3 of DA PAM 200-4 (*Cultural Resources Management*)
Integrated Pest Management Plan	Paragraphs 1-4, 2-6, and 2-12 of AR 200-5
Endangered Species Management Plan	Paragraphs 11-5 and 11-6 of AR 200-3; Paragraph 2.3 of the *Manual for the Preparation of Installation Endangered Species Management Plans* (March 1995)
Integrated Training Area Management	Paragraph 1-11 of AR 350-4

DoD Directive 4715.3 (*Environmental Conservation Program*) requires that natural resources management plans incorporate the principles of ecosystem management. NEPA analysis conducted for implementation of a natural resources management plan should, therefore, include an analysis of effects at the ecosystem level.

In addition, paragraph 2-2 of AR 200-3 specifies that funding for the preparation of NEPA documentation for Installation Master Plans, including the natural resource "component plans," will come from installation-appropriated funds.

Integrated Cultural Resources Management Plan (ICRMP). As outlined in Section 4-1(a) of AR 200-4 and Sections 2-3(c) and 2-5(a) of DA PAM 200-4, it is recommended that an EA be prepared to support and implement the ICRMP. Section 2-4(h) of DA PAM 200-4 specifies that the public involvement plan recommended for inclusion in ICRMPs should be integrated to the maximum extent possible with the public involvement requirements of NEPA. The integration of public involvement requirements for both the ICRMP and the accompanying EA/FNSI can result in both time and cost savings.

In All States Log I01-0026 (*Integrated Cultural Resources Management Plans and Consultation Guidance*, February 8, 2001), NGB-ARE has published comprehensive guidance for the preparation of ICRMPs. The All States guidance is provided in its entirety as Appendix P.

Integrated Pest Management Plan. Section 1-4 of AR 200-5 (*Pest Management*) specifies that Army Pest Management Program actions are to comply with environmental protection and improvement policies per AR 200-2. Although such actions focus largely on the outdoor application of pesticides, including aerial applications, they also include the disposal of pesticides. Guidance specific to the preparation of Integrated Pest Management Plans is provided in AR 200-5.

Endangered Species Management Plan (ESMP). As outlined in Paragraph 11-6(f) of AR 200-3 and in Section 2.3 of the Army's *Manual for the Preparation of Installation Endangered Species Management Plans*, NEPA applies to actions taken in managing listed and proposed threatened and endangered species and their critical habitats. Consultation, conference, and biological assessment procedures under Section 7 of the Endangered Species Act (ESA) should be consolidated with NEPA to minimize duplication of effort and to avoid delay. By conducting consultations with the appropriate agencies early on, the NEPA analyses may be concluded more quickly and with less difficulty. Proponents may combine ESA and NEPA documentation to reduce paperwork as long as the requirements of both statutes are met.

Like INRMPs discussed above, the preparation of NEPA documents for ESMPs will be funded with installation-appropriated funds.

Integrated Training Area Management (ITAM) Program Plans. Paragraph 1-11 of AR 350-4 (*Integrated Training Area Management*) calls for assessing impacts of training on land use. To minimize the need for individual, detailed EAs for routine training activities, "generic" descriptions of various types of training activities conducted on an installation and their environmental effects could be made a part of the installation's RPMP (see also Section 3.1.1). The related concept of environmental sustainability may also be addressed in NEPA analyses for proposed actions associated with ITAM implementation plans and projects.

3.8 Innovative Readiness Training

Innovative Readiness Training (IRT), formerly often referred to as "troop training projects" or "Community Service Projects," provides the ARNG an option to meet its mobilization requirements, enhance morale, and contribute to recruiting and retention. Authority for the ARNG and other DoD components to participate in the IRT program derives from Title 10 U.S.C. § 2012 (*Support and services for eligible organizations and activities outside the Department of Defense*). The law authorizes units or members of the armed forces to provide support and services to non-defense organizations. It requires that assistance be incidental to military training, not adversely affect the quality of training, and not result in a significant increase in the cost of the training. Moreover, the training must meet valid training requirements, and individual members' assistance must be directly related to their specific military specialties.

DoD Directive 1100.20 (*Support and Services for Eligible Organizations and Activities Outside the Department of Defense*)(30 January 1997) implements the IRT. The directive sets forth DoD policy and program requirements and assigns principal responsibility for program administration to the Under Secretary of Defense for Personnel and Readiness.

Guidance issued by the Office of the Assistant Secretary of Defense for Reserve Affairs (OASD/RA) articulates nine factors applicable to every IRT project. The first four of these are guidelines; the rest are requirements. OASD/RA reviews all IRT project submissions and requires that each project adhere to these nine factors:

- Consists of activities essential to the accomplishment of military readiness training and offers incidental benefits to the community in which the training activities occur.
- Provides support and services that, in the case of assistance by a unit, will accomplish valid unit training requirements and, in the case of assistance by an individual member, will involve tasks directly related to the specific military occupational specialty of the member and fall within the member's scope of duties.
- Is conducted in a federally funded training status under Title 10 or Title 32 of the U.S. Code.
- Does not endorse or favor any non-governmental entity (whether profit or nonprofit), commercial venture, religion, sect, religious or sectarian group, or quasi-religious or ideological movement.
- Identifies a military officer responsible for conducting each project, who will be responsible for obtaining all required documents for package submission and for coordinating with other points of contact participating in the project (including gathering final project costs for After Action Reports).
- Includes certification of noncompetition with other available public and private sector service organizations.
- Includes review and endorsement by the military Staff Judge Advocate/Legal Officer; United States Property and Fiscal Officer responsible for obligating and disbursing federal funds; Plans, Operations, and/or Training officials; Medical, Nursing, or Dental officials (if applicable) for regulation compliance; Adjutant General of the project state(s); and intergovernmental agencies (if applicable).
- As applicable, includes appropriate environmental protection documentation, evidence of coordination with the Army Corps of Engineers, and land use agreements.

- Identifies emergency evacuation of civilians (if applicable) by other than military vehicles, except in the event of life-threatening emergency or other exigent circumstances as authorized by military service regulation.

IRT projects are carried out primarily by combat service support units, combat support units, and healthcare services, general engineering, and infrastructure support and assistance personnel. ARNG IRT projects are funded from operation and maintenance and pay and allowances accounts. Additional funding, allocation of which is controlled by OASD/RA, is available from supplemental funding provided by Congress

3.8.1 Applicability of NEPA to Individual Readiness Training

IRT projects represent a broad cross section of activities. Examples of IRT activities include, but are not limited to, constructing rural roads and aircraft runways; small building and warehouse construction in remote areas; transporting medical supplies, equipment, and material to medically underserved areas of the country; and providing medical and dental care to Native Americans, Alaska Natives, and other medically underserved communities. Activities such as these fall squarely within the scope of AR 200-2 and its requirement to evaluate the environmental effects of Army actions. The following are examples of IRT projects in which the NGB and ARNG have participated:

- *Navajo Nation Building Project.* This multiyear engineering effort reconstructed Blue Canyon Road between Sawmill and Fort Defiance, Arizona. Project work included rock quarry operations, regrading of 9 miles of road, applying gravel surface to 6 miles of road, and installing shoulders, ditches, and drainage structures.
- *MIRT–97.* This medical project in Adams County, Ohio, was conducted over a 4-day period. The project involved providing medical services such as immunizations, pediatric wellness clinics, dental evaluations, vision and blood testing, physical examinations, and referrals to about 500 people from a medically underserved community in the Appalachian region of Ohio.
- *Operation ReefEx '97.* This multiyear engineering and infrastructure project has been ongoing since the 1980s. The 1997 project involved creating artificial reefs by placing 85 excess and obsolete combat vehicles, which had been demilitarized and cleaned, at designated offshore areas near New Jersey. ARNG participation in the project provided hands-on training in transporting vehicles, on- and off-loading vehicles, and securing vehicles for movement.

3.8.2 References to NEPA in Individual Readiness Training Guidance

The All States Memorandum of 6 December 2000 (*All States Log Number 100-0136, Revised Guidance for Environmental Documentation*) requires compliance with NEPA before an IRT project may begin.

Within the NGB, responsibility for the IRT Program resides in the Operations Division (NGB-ARO). Formal guidance supplementing the DoD directive on IRT is pending. As noted earlier, current OASD/RA guidance requires that all IRT project submissions demonstrate appropriate environmental protection documentation.

3.8.3 Suggestions for Preparing NEPA Analyses Involving Individual Readiness Training

The NGB All States Memorandum requires that all project proposals submitted to NGB-ARO be accompanied by the NGB-ARE version of the Environmental Checklist (see Appendix L). The checklist must cite a categorical exclusion or indicate that an EA is to be completed. If an IRT project cannot be categorically excluded, the proponent is responsible for securing funding to accomplish an EA or EIS, as appropriate.

Many IRT projects may be categorically excluded (possibly requiring a REC). The routine repair and maintenance of buildings, roads, grounds, and the like are categorically excluded from more detailed analysis. In addition, construction projects that do not significantly alter land use may also be categorically excluded. A construction project, in this case, would require a REC. With promulgation of the Army's revised NEPA regulations, several CXs are now potentially applicable to IRT projects. These include:

- Nonconstruction activities in support of other agencies or organizations involving community participation projects and law enforcement activities.
- Construction of an addition to an existing structure or facility, and new construction on a previously developed site or on a previously undisturbed site if the area to be disturbed has no more than 5.0 acres of new surface disturbance. This does not include construction of facilities for the transportation, distribution, use, storage, treatment, and disposal of solid waste, medical waste, or hazardous waste (REC required).
- Demolition of nonhistoric buildings, structures, or other improvements and disposal of debris from them, or removal of a part of them for disposal, in accordance with applicable regulations, including those regulations applying to removal of asbestos, polychlorinated biphenyls (PCBs), lead-based paint, and other special hazard items (REC required).
- Road or trail construction and repair on existing rights-of-way or on previously disturbed areas.
- Land regeneration activities using only native trees and vegetation, including site preparation. This does not include forestry operations (REC required).
- Routine maintenance of streams and ditches or other rainwater conveyance structures (in accordance with U.S. Army Corps of Engineers permit authority under Section 404 of the Clean Water Act and applicable state and local permits), and erosion control and storm water control structures (REC required).
- Acquisition, installation, and operation of utility and communication systems, mobile antennas, data processing cable, and similar electronic equipment that uses existing rights-of-way, easements, distribution systems, or facilities (REC required).
- Routine repair and maintenance of buildings, airfields, grounds, equipment, and other facilities. Examples include, but are not limited to, removal and disposal of asbestos-containing material (for example, roof material and floor tile) or lead-based paint in accordance with applicable regulations; removal of dead, diseased, or damaged trees; and repair of roofs, doors, windows, or fixtures (REC required for removal and disposal of asbestos-containing material and lead-based paint or work on historic structures).
- Routine repair and maintenance of roads, trails, and firebreaks. Examples include, but are not limited to, grading and clearing the roadside of brush with or without the use of herbicides; resurfacing a road to its original condition; pruning vegetation, removing

dead, diseased, or damaged trees, and cleaning culverts; and performing minor soil stabilization activities.

3.9 Classified Actions Within the United States

An exception to the normally open NEPA process occurs when actions are proposed that, for reason of national security, must be classified in whole or in part. Although classified information cannot be openly disseminated to regulatory agencies and the public, classification does not relieve a proponent of the necessity to assess the potential environmental effects that would result from implementing a proposed action. Depending on the type of ARNG action proposed, an EA or an EIS might need to be prepared in accordance with AR 200-2. The public dissemination of classified information contained within or associated with the NEPA document must, however, be handled in accordance with AR 380-5 (*Department of the Army Information Security Program)*.

When the use of classified information (e.g., performance characteristics of a new weapon system, the application of advanced technologies and materials, and unique training requirements for special forces) is necessary in supporting a NEPA analysis, such information should be discussed in a classified appendix or addendum, separate from the main body of the EA or EIS. This approach might allow for disclosing the bulk of the document that is unclassified to other agencies and to the public, thus minimizing the classification issues. In other cases, the entire document might require appropriate classification. Only properly cleared reviewers and decision makers with a "need to know" would be provided the classified portions.

As shown in Figure 1-2, coordination with HQDA is required before beginning the NEPA process for proposed ARNG actions that are classified. Refer to 40 CFR 1507.3(c) and AR 200-2 for procedures on addressing classified actions and details on handling classified information in environmental documents.

3.10 Deployments for Operations Conducted Outside the United States

ARNG deployments for military operations outside the United States are conducted for a wide range of activities. These activities can include those associated with war and operations other than war, which focus on deterring war and promoting peace. Noncombat actions conducted overseas by the ARNG include humanitarian assistance and disaster relief, nation building, security assistance, field training exercises, foreign internal defense, counterdrug operations, evacuation of noncombatants, and peacekeeping. Such operations can also involve other U.S. and foreign forces. Although some military operations are conducted for one purpose, others might have multiple purposes, such as the 1994-1995 operation in Haiti that was intended to combine nation building and security missions.

3.10.1 Applicability of NEPA to Actions Within the United States That Support Overseas Deployments

When ARNG activities are conducted in the United States (including those located within U.S. territories and possessions) in support of deployments conducted outside the United States, the domestic activities not designated as emergencies are still fully subject to NEPA in accordance with AR 200-2. Examples include transportation and port embarkation/debarkation activities conducted within the United States in preparation for and following participation in foreign peacekeeping operations or multinational training exercises conducted overseas. Note that proponents have available for their use a CX for routine movement of personnel, as well as the routine handling and distribution of nonhazardous and hazardous materials, in conformance with

federal and state regulations. As discussed in Section 3.11, ARNG actions that occur in the event of an emergency are usually exempt from NEPA (see AR 200-2).

3.10.2 Applicability of Other Environmental Planning Regulations to Deployments Conducted Outside the United States

AR 200-2 specifies that the environmental effects of major ARNG actions abroad must be considered as an integral part of all decisions. In addition to the requirements identified in AR 200-2, DoD Directive 6050.7 (*Environmental Effects Abroad of Major Department of Defense Actions*) (Appendix Q) provides the underlying DoD policy and procedures for taking into account environmental considerations when authorizing or approving certain major federal actions that would potentially do significant harm to areas outside the United States. DoD Directive 6050.7 implements the requirements of Executive Order 12114 *(Environmental Effects Abroad of Major Federal Actions* (Appendix R), with respect to major DoD actions that might adversely affect the environment of a foreign nation, a protected natural or ecological resource of global importance (e.g., certain species of marine mammals and rainforest ecosystems), or the global commons.[10] It is important to note that the deployment of ships, aircraft, or other mobile military equipment is not, in itself, a major federal action for purposes of this directive. Key requirements of DoD Directive 6050.7 and AR 200-2, as well as other related environmental statutes and policies applicable to ARNG deployments outside the United States, are discussed in the following paragraphs. Specific responsibilities of HQDA and other Army agencies for review of environmental effects abroad resulting from major Army (and ARNG) actions are further described in AR 200-2.

Environmental Analysis and Documentation. As described in AR 200-2 and DoD Directive 6050.7, several different forms of environmental analysis and documentation are prepared for DoD actions conducted outside the United States, depending on the geographic area that could be affected. The prerequisite for DoD activities that would result in significant harm to the global commons calls for preparation of an "Environmental Impact Statement" that is similar in form to an EIS as defined under NEPA but has different administrative and procedural requirements. In some cases, an "Environmental Assessment" can first be prepared to determine whether the proposed action is major and federal, and whether it significantly harms the global commons. For actions that normally do not, individually or cumulatively, result in significant harm to the environment, DoD may provide CXs, as established by the Assistant Secretary of Defense. If an action is covered by a CX, no Environmental Assessment or Environmental Impact Statement is required.

[10] Executive Order 12114 refers to "global commons" as geographic areas located outside the jurisdiction of any nation, including ocean areas outside territorial limits and the continent of Antarctica. However, in 1993 the District of Columbia Circuit Court of Appeals ruled that NEPA applies to National Science Foundation activities in Antarctica (*Environmental Defense Fund* v. *Massey*, 986 F.2d 528 [C.A.D.C., 29 January 1993]). The Court's decision was based on Antarctica's not being a nation or a global commons (like the open oceans). Rather, it is a continent without a sovereign where nations can pursue common interests. To ratify the 1991 *Protocol on Environmental Protection to the Antarctic Treaty* and to implement its environmental safeguards as well as clarify the application of NEPA, President Clinton, on 2 October 1996, signed the Antarctic Science, Tourism, and Conservation Act of 1996 (Public Law 104-227). As specified in the act, the environmental impact assessment procedures contained in the *Protocol* fulfill obligations under Section 102(2)(C) of NEPA. (R.S. Cunningham, Environmental Review: A Gateway to International Cooperation, *Proceedings of the 22nd Annual Conference of the National Association of Environmental Professionals*, 1997.)

For DoD actions that would cause significant harm to the environment of a foreign nation or to a protected global resource, two other types of environmental documents are used:

- **Environmental Studies (ESs).** ESs are used to document bilateral or multilateral studies of actions that are relevant or related to the United States and one or more foreign nations, or to an international body or organization in which the United States is a member or participant.
- **Environmental Reviews (ERs).** ERs are prepared unilaterally by DoD or in conjunction with another U.S. federal agency for actions that affect the environment of a nation not involved in the undertaking.

Major federal actions are considered to significantly harm the environment of a foreign nation or a protected global resource only when (1) they generate products, emissions, or effluents that are prohibited or strictly regulated by U.S. federal law because their toxic effects create a serious public health risk or (2) they include a physical project that is prohibited or strictly regulated in the United States by federal law to protect the environment against radioactive substances. No specific environmental documentation or reviews are required with respect to federal actions outside the United States that affect only the environment of a *participating or otherwise involved* foreign nation and do not involve toxic products, emissions, or effluents, or physical projects that are prohibited or strictly regulated by U.S. federal laws or involve resources of global importance that have been designated for protection.

In certain instances, general exemptions established by Executive Order 12114 (see Appendix R) may be applicable. DoD also has the authority to approve additional exemptions on a case-by-case basis, such as for emergencies, national security considerations, or exceptional foreign policy requirements, and for class exemptions when there is a group of related actions that preclude or are inconsistent with the preparation of environmental documents and the implementation of other requirements prescribed by Executive Order 12114. Refer to DoD Directive 6050.7 (see Appendix Q)for a complete listing of the general exemptions, along with a description of specific requirements regarding the application and preparation of each of the environmental documents identified in this section.

Environmental Compliance Standards for ARNG Actions at Installations. In addition to the requirement to prepare environmental documents for major federal actions conducted outside the United States, ARNG operations and other actions conducted at DoD installations in foreign nations are subject to the minimum standards for environmental compliance promulgated by DoD Instruction 4715.5 *(Management of Environmental Compliance at Overseas Installations*) (see Appendix S). Compliance with these environmental standards protects human health and the environment in foreign countries where DoD maintains substantial installations.[11] Compliance conditions should be recognized in any studies prepared in accordance with DoD Directive 6050.7.

DoD Instruction 4715.5 directs that DoD must comply with Final Governing Standards (FGS), when established, for a particular foreign country. Because of differing national laws, unique sets of FGS are applicable to individual nations. FGS are currently established for a number of countries, including Great Britain, Germany, Belgium, the Netherlands, Italy, Spain, Panama,

[11] This requirement is not applicable to DoD installations that do not have a potential effect on the natural environment (e.g., facilities and offices that are primarily administrative) or where DoD components exercise temporary control.

Korea, and Japan. In countries where FGS have not been established (e.g., Canada), the standards presented in DoD's *Overseas Environmental Baseline Guidance Document* (OEBGD), dated October 1992, are used unless the OEBGD is inconsistent with applicable host-nation environmental standards or standards under applicable international agreements, and unless these other applicable standards provide more protection to human health and the environment. In cases of inconsistencies, the more protective standard is normally used unless specific international agreements exist.

Before authorizing or approving ARNG actions in foreign countries, ARNG proponents should review the specific requirements in DoD Instruction 4715.5, along with the applicable FGS or the OEBGD, to determine the necessary procedures to be taken to inform decision makers of environmental considerations.

Environmental Annex for Overseas Operation Orders and Plans. The overseas compliance policies reflected in the FGS and OEBGD do not apply to off-installation operational and training deployments, such as in cases of hostilities or when U.S. forces operate as part of a multinational force not under full control of the United States. Joint operational and training deployments conducted off DoD installations located in foreign countries are, however, required to comply with the environmental management practices and environmental compliance standards contained within the environmental annex incorporated into operation plans or orders. Referred to as "Annex L," *Environmental Considerations*, this annex is a requirement of Unified Combatant Command environmental procedures. The sample annex provided in Appendix T is designed to comply with DoD Directive 6050.7 and Executive Order 12114.

The purpose of Annex L is to provide guidance to protect the health and welfare of U.S. personnel, and the human health and environment of the affected nation, during the conduct of deployments resulting from implementation of the order or plan. It should include major assumptions used; environmental protection responsibilities for service components and deployed commanders; a concept of operations; and specific operational requirements in the areas of drinking water, wastewater, solid waste management, spill prevention and control, hazardous waste management (nuclear, biological, and chemical), natural resources, and historic and cultural resources.

Classified Information. Any classified information used in support of DoD Directive 6050.7 or other related directives and regulations will be safeguarded in accordance with procedures contained in DoD Directive 5200.1 (*DoD Information Security Program*). The security requirements of Executive Order 12958 (*Classified National Security Information*), however, take precedence over any disclosure requirement in DoD Directive 6050.7.

3.11 Actions Exempt from NEPA

Figure 1-2 shows a series of steps and levels of analysis in the ARNG's NEPA process, which includes early identification of actions that are determined to be emergencies or are otherwise exempt from NEPA. Descriptions of these types of actions are provided in the subsections that follow.

Emergencies. ARNG operations initiated in response to an emergency (whether the emergency is situated within or outside the United States) are usually exempt from NEPA if timely action is required for the promotion of national defense and the protection of national security, human life, or property. AR 200-2 specifies requirements for notification and consultation with various levels of government in the event of emergency actions; however, the regulation also stipulates

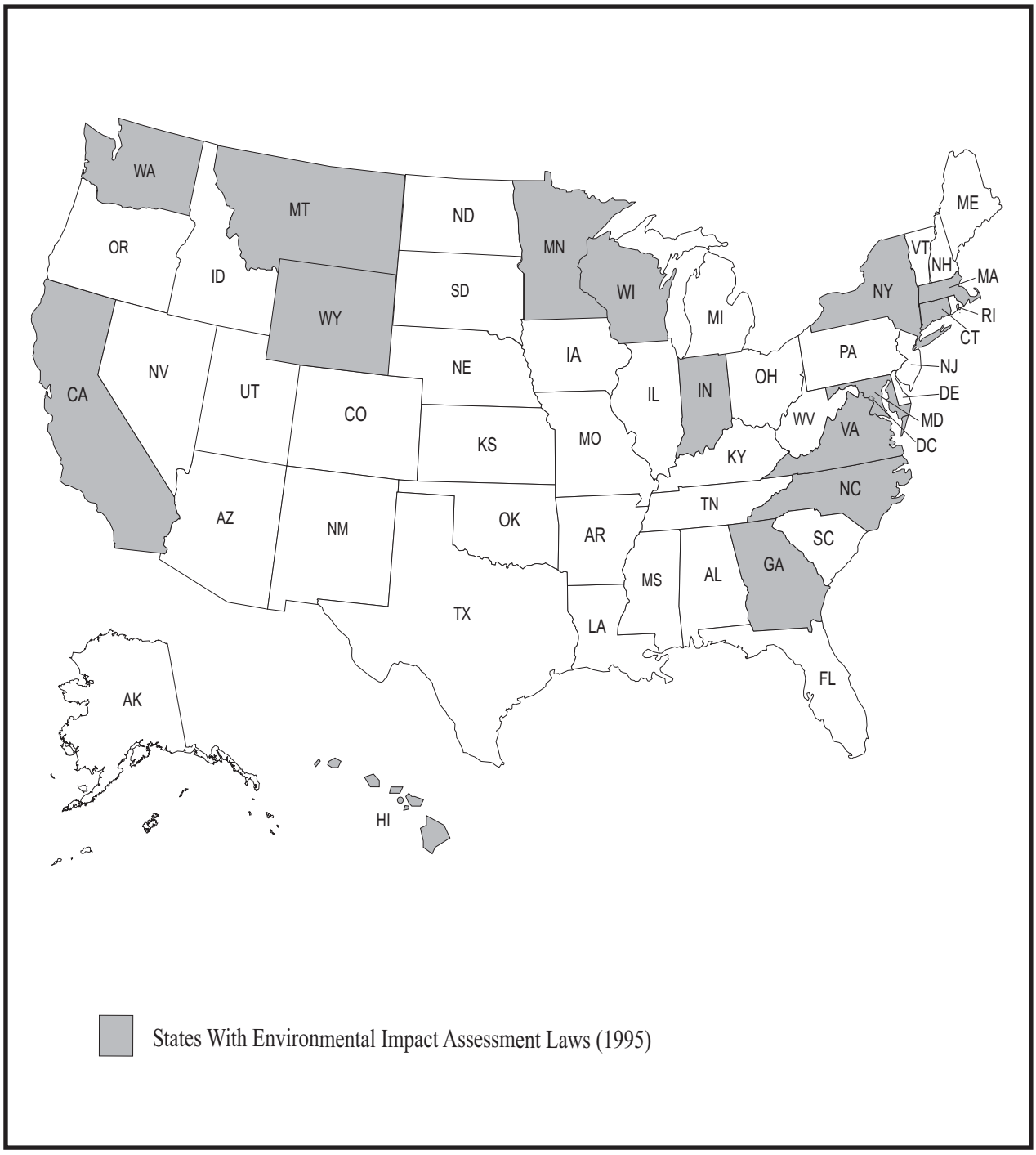
that such actions may proceed if compliance with NEPA procedural requirements would delay the needed emergency actions. The regulation also specifies that a public affairs plan should be developed as soon as possible so that channels of communications between the media, the public, and the ARNG remain open. Although the requirement for NEPA analysis and documentation typically would not apply to emergency-related actions, HQDA may still require environmental "After Action Reports" to be prepared. All other ARNG actions that are not necessary to control the immediate effects of an emergency remain subject to prior NEPA analysis in accordance with AR 200-2. The AR 200-2 requirements for agency consultation, and preparation of a public affairs plan or "After Action Reports," are not, however, applicable to state call-ups of the ARNG during a natural disaster.

Actions Covered by Another Regulation. NEPA does not apply to an ARNG action that is already covered by the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). In a memorandum dated 16 January 1992, the Department of Justice, Environmental and Natural Resources Division stated that, as a matter of law, NEPA does not apply to CERCLA activities. The Department of Justice explained that, in its opinion, NEPA's specific requirements are "either duplicative of, or in conflict with, those of CERCLA." Thus, if an ARNG site is undergoing remediation for contaminated soil under CERCLA, NEPA is not used to analyze and publicly disclose the environmental effects associated with the remedial action because alternatives analysis and public involvement are provided for under CERCLA.

Regulations other than NEPA sometimes require the ARNG to seek approval from federal, state, or local governments before undertaking an action that might affect the environment. For example, states might have their own impact assessment laws that proponents must consider before undertaking any action (see Figure 3-1). Adherence to these regulations does not exempt the action from NEPA requirements. The proponent must perform the appropriate NEPA analysis as well as comply with any applicable state or local requirements. ARNG sites with the requirement to conduct or participate in state-level environmental reviews are encouraged to negotiate a joint review process with the state government that will allow fulfillment of both federal (NEPA) and state environmental analysis and regulatory requirements concurrently.

Actions with Statutory Exemptions. Although rare, some actions may be exempted from NEPA by other laws as enacted by Congress. For example, Public Law 101-510 (1990 Defense Base Closure and Realignment Act) waived certain procedural elements of NEPA. Specifically, Public Law 101-510 waived the procedures of NEPA because the act would have applied to the action of recommending bases for closure. Because of this law, NEPA applies only to the decision of disposal of property and the relocation of functions at receiving bases. The ARNG interprets the creation of reserve component enclaves for the continuation of similar functions at closing or realigning bases as falling under this exemption. Future ARNG proposed actions within an enclave would, however, require NEPA analysis.

Additional factors can influence whether ARNG NEPA analysis is required or the extent of that analysis. Because the ARNG operates on both the federal and state levels, some confusion often arises as to whether a proposed ARNG action is subject to NEPA. If an ARNG action is funded wholly or in part by federal funds granted for that action, the action is subject to NEPA. Examples of ARNG federal actions include construction projects, equipment fielding, land acquisition, and the implementation of real property and resource plans. If an action is funded wholly by the state, NEPA might not apply. In cases where states have their own environmental impact assessment laws (see Figure 3-1), however, the state laws might be more stringent than NEPA. State-level ARNG actions include those undertaken during mobilization by the state governor to assist with natural disaster relief.



Source: Defenders of Wildlife, 1995. Saving Biodiversity: A Status Report on State Laws, Policies, and Programs.

Figure 3-1. States With Environmental Impact Laws

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4.0 PLANNING AND INITIATING A NEPA ANALYSIS

The first step in planning and initiating an ARNG NEPA analysis is mapping out, in general terms, what activities are to occur and organizing resources to accomplish the work. To ensure that adequate time and resources are allocated to the analysis, the proponent must make an initial decision on the appropriate level of analysis and documentation, develop a well-defined description of the proposed action and alternatives, and determine the scope of the analysis. Having this information, as well as the desired implementation date for the proposed action, the proponent can prepare a plan for the NEPA analysis that will support project schedules and other requirements.

This section identifies several major steps that occur early in the NEPA process. Familiarity with the elements of the NEPA process discussed in this section will permit the proponent to make intelligent, well-planned resource allocations, develop a workable schedule, and start the NEPA analysis process in the right direction. The material addressed in this section is only the initial part of the overall task. Data gathering, impact analysis, document preparation and review, and other management tasks must also be initiated, supervised, and completed.

4.1 Selecting the Appropriate Level of Environmental Review and Documentation

The NEPA process begins with identification of the proposed action by the proponent. Consideration of the proposed action, its location, and its duration in light of the location in which it is proposed to occur is essential to deciding the appropriate level of analysis. Under procedures established in CEQ regulations (see Appendix B) and AR 200-2 (see Appendix F), there are three basic levels of environmental analysis and documentation—CX, EA, and EIS. (Refer to Section 1.5 of this handbook for definitions of these terms.) The determining factors in selecting the appropriate level hinge on the type of action proposed and the anticipated significance of the environmental effects associated with the action. Historically, most ARNG proposed actions evaluated under NEPA, other than those categorically excluded from detailed analysis, have involved the preparation of EAs. Early coordination with the Environmental Program Manager and/or the NGB-ARE can assist the proponent in selecting the appropriate level of analysis.

The second step in the NEPA process is to determine whether the proposed action is categorically excluded, in which case the action requires neither an EA nor an EIS because the ARNG has determined that the action would not have an individual or cumulative adverse effect on the environment. If the action satisfies all of the ARNG's screening criteria, is covered by one or more CXs, and no "extraordinary circumstances" apply (see AR 200-2), the proponent should then determine whether a REC is required. Section 5 provides detailed guidance on determining when and how to use a CX, preparing a REC, and using the ARNG's Environmental Checklist (see Appendix L).

If it is found that the proposed action is not categorically excluded, an initial determination should be made as to the likely significance of effects that could be expected as a result of implementing the action. (See the discussion on the meaning of "significance" and examples of significance criteria in Section 4.11.2.) For those actions where no significant effects are expected, an EA should be prepared to inform the decision makers and reviewers of the likely environmental consequences of implementing the action. If potentially significant effects could occur but can be adequately mitigated to less-than-significant levels, preparation of a mitigated EA/FNSI might be appropriate; otherwise, an EIS should be prepared.

When a proponent is uncertain whether an action would result in significant effects or believes

that significant effects are unlikely, an EA should be prepared to first determine what environmental effects would likely occur as a result of implementing the action. If it becomes clear while preparing the EA that significant effects that could not be mitigated would occur, work on the EA can be stopped and an EIS begun. To help the proponent in making this determination, AR 200-2 provides a list of conditions that require an EA or an EIS. In addition, AR 200-2 provides a separate list of actions that normally require an EA or an EIS.

Before beginning preparation of an EA or EIS, it is also important to check to see whether the action has already been adequately addressed in another EA or EIS prepared by the ARNG or another agency. If it has, a REC that cites the existing document may be prepared. When deciding whether an action is addressed adequately by an existing NEPA analysis, the scope of the proposed action, previous activities at the proposed site, changes in regulatory requirements, or new technical information should be considered. Thus, an existing EA or EIS might no longer be adequate if significant changes have occurred in the affected environment, in the nature or consequences of reasonable alternatives considered since the original EA or EIS was completed, or in the environmental laws and regulations affecting the proposed action.

Any increases in the scope of actions already analyzed should also be considered before citing an existing NEPA document in a REC. For example, if the use of 50 tanks in an ARNG training exercise was analyzed in a previous EA and the proposed action calls for using 100 tanks, it might be appropriate to evaluate the possibility of additional effects in a new or supplemental document. If after reviewing an older EA/EIS it is determined that the proposed action description would not change and there would be little or no change to the environmental effects, consideration may be given to using the original document without preparing a supplement.

When only certain portions of a prior EA or EIS remain valid (e.g., affected environment descriptions and impact analysis results for certain resources), the valid portions of the analysis that are applicable to a new or modified proposal might still be suitable for incorporation by reference into the new NEPA analysis. This approach might help to simplify conducting new data collection and analysis efforts and also help to cut down on the bulk of the new document (see also 40 CFR 1502.21).

4.2 Developing a Management Plan for NEPA Analysis

Once the need for preparation of an EA or EIS has been determined, planning for analysis and document preparation usually begins with the development of some form of a process management plan. A management plan can serve as a guide for the entire EA or EIS process by establishing the responsibilities, methodologies, schedules, and procedures to guide the effort. As a coordination tool, the plan also helps to build team support with other offices and agencies involved in the effort. The suggested content of a management plan is outlined below. Regardless of whether a formal, written plan is developed, acquiring the information outlined is essential for successfully completing an EA or EIS and for avoiding later challenges that could result in project delays.

- **Organizations, Roles, and Responsibilities.** In many instances, the efficiency of the NEPA process and effectiveness of the documentation to identify potential environmental impacts rests largely on the shoulders of the proponent's NEPA project manager. This person should be selected based on training, experience, and organizational ability. In addition, the designated project manager should be someone who has time to carry out the responsibilities. When project environmental documentation is to be prepared

through the use of contractor assistance, the project manager should also have training and experience in contracting matters.

The project manager should identify the name, address, and phone numbers for each organization's point(s) of contact, and the roles of all organizations involved in the effort should be clearly defined. This would include describing their responsibilities in supporting the environmental analysis and document reviews, and identifying signatory authorities for document approval. In some cases, creating a formal charter is useful in establishing a meaningful and well-defined partnership between the lead agency and other supporting and cooperating agencies.

When working with other agencies, it is particularly important early on for the proponent to clearly identify and obtain concurrence on the following: the responsible landowner; which set of NEPA implementing regulations (and format) will be used during document development; and who will fund the NEPA effort, act as public spokesperson, be the decision maker, and have signatory authority on the FNSI or ROD. The state ARNG must coordinate with NGB-ARE whenever cooperating agencies are involved.

- **Task Description and Schedule.** A work breakdown structure (or comparable management tool) should be developed. A milestone schedule, keyed to task descriptions, should display, as a minimum, time periods for data collection, agency consultation, preparation of draft and final documents, document reviews, target dates for publishing public notices, and the timing of other public involvement activities. Table 4-1 presents a sample milestone schedule for an EA (where the ARNG has arranged for contractor assistance for preparation of the document).

TABLE 4-1. MILESTONE SCHEDULE

Action/Event	Days Following Notice to Proceed
Notice to Proceed	0
Kickoff meeting	10
Contractor submit Management Plan	15
Initiate agency consultation	20
Contractor submit draft DOPAA	30
ARNG review draft DOPAA	45
Contractor submit final DOPAA	55
Contractor submit PDEA	60
ARNG review PDEA	75
Contractor revise PDEA and submit DEA to ARNG	85
ARNG submit DEA to NGB	90
NGB review DEA	135
Contractor revise DEA (as required)	150
ARNG publish NOA for DEA 30-day public review	150
ARNG receive public comments on DEA	180
Contractor revise DEA per ARNG direction	190
Contractor submit PFEA/draft FNSI to ARNG	190
ARNG review PFEA/draft FNSI	205
Contractor revise PFEA and submit FEA/final FNSI to ARNG	215
ARNG submit FEA/final FNSI to NGB for review/approval	215

NGB review FEA and final FNSI	260
NGB sign FNSI	260
ARNG publish NOA for FEA and FNSI 30-day public review	260
(ARNG respond to comments, as appropriate)	290
ARNG initiate action	291

- **Analysis Methodologies.** This section of the management plan should present a preliminary listing of the environmental issues and other topics to be examined and a brief description of the methodologies to be employed in the analysis. If the use of specialized analytical tools (e.g., air quality, noise, or socioeconomic models) is anticipated, those tools or methodologies should be explained.

- **Public Involvement.** All public involvement, either planned or anticipated (for EAs and EISs), should be discussed. This would include details on formal scoping requirements and public meetings (primarily for EISs), the management and coordination of public comments, and the handling of any news media inquiries received. NGB guidance calls for a Public Affairs Plan to be prepared for all ARNG EISs (see Section II(6)(g)(4) of the *Public Affairs Guidance on National Guard Bureau Environmental Programs* [Appendix U in this handbook]).

- **Description of the Proposed Action and Alternatives.** One of the most critical components of the management plan is a description of the proposed action and alternatives (DOPAA), which represents much of the front-end portion of any EA or EIS. The DOPAA contains a statement of the purpose of and need for the proposed action (see Section 4.5). It also describes the proposed action and associated activities, including alternatives to the proposed action, to the extent that they are understood at this early stage of the process (see Sections 4.6 and 4.7, respectively). Not only will the DOPAA ultimately facilitate development and preparation of the EA or EIS, but it will also help in early coordination with other ARNG offices and outside agencies (federal, state, and local) and, in the case of an EIS, will provide a basis for formal scoping. A clear statement in the DOPAA of the "decision(s) to be made" on the proposed action can provide a further check on what the proposed action is and what it is expected to accomplish. Because the "initial cut" of the DOPAA is almost certain to change before preparation of the first draft of the EA or EIS, consideration should be given to preparing it in draft or outline form and circulating it to selected reviewers to obtain their "buy-in" and to avoid unnecessary revisions to the document later on. In developing the DOPAA, note that it should not assume a life of its own, but should be designed for easy integration into the NEPA document.

- **Appendices.** Other information that should be contained in the management plan includes an outline of the EA or EIS to be prepared, a brief description of existing technical and environmental documentation on the project and the project location (with known or suspected relevance to the effort), and a listing of any major unresolved issues pertinent either to the DOPAA or to the analysis and document preparation effort.

A management plan such as this is normally the responsibility of the proponent; however, plans are often prepared by the organization or contractor tasked to prepare the NEPA document, with considerable participation and oversight by the proponent. Development of the plan might also require input and assistance from the Environmental Program Manager, the state Public Affairs Officer, the NGB-ARE, and/or the NGB Public Affairs Environmental Office.

In addition to those issues to be addressed in the management plan, other issues that must be considered in the early planning for an EA or EIS include the following:

- Personnel to accomplish the analysis and document preparation (in-house staff or contract support).
- Availability of the analysis and documentation team members and reviewers (consideration for participants being away on temporary duty, vacation, and holidays).
- Time frames dictated by the proposed action, the NEPA process, or data/model analysis requirements.
- Budgetary constraints and requirements.

To help the proponent and preparers of NEPA documents to avoid common mistakes made during the NEPA process, a number of typical deficiencies in EAs and EISs, and other lessons learned in preparing NEPA analysis and documentation, are presented in Appendix V.

4.3 Obtaining Analysis and Documentation Support

Environmental analysis and documentation can be prepared by any organization or team with the expertise to address all requirements adequately. Analysis should never be conducted by a single person without input and consultation from appropriately knowledgeable persons from relevant scientific and technical disciplines. NEPA specifically requires that environmental analysis be conducted using an interdisciplinary approach that ensures integration of both the natural and social sciences. Proponents often do not have the in-house expertise to adequately perform the required analysis and prepare the NEPA document. However, the Environmental Program Manager and the NGB-ARE usually do have the relevant expertise or access to it.

The proponent's staff might also need assistance from the appropriate Environmental Office when proposing to take an action that is categorically excluded or when adopting an existing EA or EIS. In all cases, a representative of the proponent should assist in preparing a REC if one is being used. In some instances, the proponent's staff might prepare an uncomplicated EA if the organization's Environmental Office provides information on the existing environmental and cultural resources, and points of contact from whom the proponent can get help in evaluating potential effects. In other cases, the Environmental Office might be tasked to perform the necessary analyses and write the EA. In those cases, the proponent must provide a description of the proposed project, consider alternatives, and address appropriate mitigation measures. EISs and complex EAs, often prepared with contractor support, should involve both the proponent and the supporting Environmental Office staff in preparing scopes of work, reviewing documents, and participating in the public involvement process.

A comparison between preparing NEPA documents in house and using outside contractor support is provided in Table 4-2. When using contractor support to conduct the analysis and prepare the NEPA documents, it is important to provide the contractor with a clear statement of work that spells out specific milestones and deliverable requirements. A sample statement of work for contractor support is provided in Appendix W. It demonstrates many of the basic elements required for entering into a contractual relationship for the preparation of NEPA documents; it does not include material that would apply only to specific or individual cases. The content of the statement of work must be evaluated to ensure that the needs of the NGB are adequately

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TABLE 4-2. COMPARISON BETWEEN IN-HOUSE PREPARATION AND USE OF CONTRACTOR SUPPORT

Task	In House	Contractor Support
COST:		
Funding for the document	+	–
State Environmental Office personal efforts (time and focus)	–	+
EXPERTISE:		
Technical expertise in preparing documents	(?)	+
Basic science expertise	(?)	+
CONTROL:		
Content	+	(?)
Content of responses to requested staffing comments	(?)	–
TIME:		
Reprinting of document	–	+
Making changes based on staffing comments	(?)	(?)
Physical preparation and writing of the document	(?)	+
QUALITY:		
Final document appearance	(?)	+
Level of detail contained in the document	(?)	(?)
Research thoroughness	(?)	(?)
CREDIBILITY/OBJECTIVITY	–	+

Explanation: "+" = advantage, "–" = disadvantage, "(?)" = personnel-dependent.

194

195 addressed prior to committing resources to NEPA documentation. Other areas to be considered
196 and issues to be addressed in the statement of work may include the following:

197 • The contractor's responsibility for involvement in public meetings, if required.

198 • The number of document iterations to be prepared (including a "camera-ready" copy and
199 additional "hard" copies) between initial draft and final deliverables.

200 • The number of copies required for staffing the document at the state level, at other
201 agencies, and at the NGB.

202 • How public comments and resolution of comments will be addressed in the final version
203 of the document (if comments are received).

204 ## 4.4 Allowing Time for Preparation

205 The proponent must begin on time to finish on time. It is the proponent's responsibility to
206 allocate sufficient time for the NEPA process. Failure to anticipate NEPA's procedural
207 requirements and time lines can result in delays that adversely affect ARNG missions or fiscal
208 resources.

209 Differences in the nature of proposed actions, their complexity, and the availability of data often
210 influence the amount of time required to complete analysis and documentation. The NEPA

statute, CEQ regulations, and AR 200-2 impose certain mandatory steps and minimum review periods for specified aspects of the NEPA process that will affect all proposed actions. For instance, a DEIS must be made available for public comment for not less than 45 days. As a practical matter, 8 months or more is often needed to prepare an EA, and 24 months or more to prepare an EIS. Where NEPA documentation is prepared by contractors, additional time might be required for completion of contract solicitation, award, and administration.

Preparation and review of documents directly affect processing time lines. Depending on the level of analysis and documentation chosen for a proposed action, there might be preliminary draft, draft, preliminary final, and final versions of the document. Multiple document iterations and intermediate reviews can lengthen the time line. Additional time must be allocated when there are numerous reviews by internal or external offices and agencies (e.g., other DoD offices, Bureau of Land Management, U.S. Fish and Wildlife Service, and U.S. Forest Service).

Sections 6 and 7 include a detailed look at the steps required for preparation of an EA and EIS, respectively. Proponents should give consideration to the amount of time required to meet each of the identified steps and plan accordingly.

4.5 Identifying the Purpose of and Need for an Action

Associated with the earliest steps in preparing NEPA documentation is the requirement to specifically describe the purpose of and need for the proposed action. This step is a basic requirement of CEQ and ARNG regulations. It is the first opportunity in the NEPA process for informing interested parties why the ARNG is proposing to undertake an action and what objectives the action is intended to satisfy. It also can serve as a "reality check" for cases in which a proponent might not have clearly described the action proposed. In general, for a given proposed action, the purpose and need statement should provide answers to the questions: Why there? Why then? For what objective?

In some cases, a proposed action may be defined by higher headquarters or an outside entity. An example of this is equipment modernization or force structure changes within the ARNG that are directed by HQDA. In such cases, the statement of purpose and need should make reference to the directed nature of the proposed action as well as the underlying mission-related requirements for the action.

The statement of the "purpose" should refer to the action, not to the document and not to the preferred alternative. Thus, the statement "The purpose of the proposed action is to provide adequate facilities for the maintenance of armored combat vehicles" would be correct, whereas statements such as "The purpose of the action is to construct and operate a tank maintenance facility at Site A" or "The purpose is to comply with NEPA" would be inaccurate or misleading. The "need" statement for a proposed action generally reflects the proponent's underlying mission goals and the objectives to be achieved by the statutory authority under which the ARNG or other lead agency is proposing to act. Expressing the need for a proposed action in a statement such as "to maintain armored vehicles for training ARNG personnel in order for the United States to ensure the military readiness of its ground forces" would be adequate. A need statement such as "tanks require constant maintenance and repairs" would be inappropriate.

The statement of the ARNG's underlying purpose of and need for an action is critical to identifying the range of reasonable alternatives to be considered in the analysis. If the purpose and need are defined too broadly, the number of alternatives that might require analysis would be virtually limitless. On the other hand, it is inappropriate in most situations to define the purpose

and need so narrowly that only the preferred alternative would be analyzed. The preferred course of action usually represents only one means of meeting the purpose of and need for an action. For example, if the purpose of a proposed action (e.g., modify airfield landing and departure patterns) is to sustain aviation training mission requirements at a given installation despite changes in land use patterns off post, and the need is to comply with noise regulations and respond to complaints of excess noise from the local community, reasonable alternatives to the proposed action might include construction of noise barriers, relocation of homeowners affected by excess noise, noise proofing of affected homes, and changes to airfield hours of operation. The relocation of aviation operations to another installation would not, however, support the underlying purpose and need.

Understanding the relationship between the purpose and need statement and the alternative actions proposed is of great importance because only those alternatives that truly support the ARNG's purpose and need for action are to be analyzed in a NEPA document.

4.6 Defining the Proposed Action

Following identification of the purpose of and need for the action, the proponent must describe the details of the proposed action. The description of the proposed action is the foundation for the entire environmental analysis process. It can be either a broad characterization of the goals or objectives that would be achieved by implementing one of several alternatives, or it can be presented as a detailed, stand-alone, preferred course of action. In either case, objectivity must be maintained both in the description of the proposed action and throughout the analysis so that reasonable alternative courses of action can be developed and equally considered.

The proposed action must be carefully and clearly defined because a poorly defined proposed action might lead to inadequate or inappropriate impact identification and analysis, and possible legal challenge. It is important that all activities associated with the proposed action be identified and described in sufficient detail to permit a meaningful analysis of the potential environmental consequences. Defining the action too narrowly (e.g., underestimating the number of individual events or troop participants in planned training exercises) could result in constant modifications to the document. If the action is defined too broadly (e.g., not providing sufficiently detailed information to describe where a new facility is to be located), the specifics of the action might be misunderstood or the analysis might not indicate the real effects that could occur. Either case is a disservice to document reviewers, the decision maker, and the public.

The description of the proposed action should answer the following questions. Depending on the approach used to characterize the proposed action, some of these questions might be fully answered only by describing the alternatives to implementing the proposed action (see Section 4.7).

- ***Who*** is proposing to undertake the action and which agencies have authority over it and responsibility for it?
- ***What*** is the ARNG's decision to be made and what activities are associated with the proposed action?
- ***When*** would the proposed action occur and what would its duration be?
- ***Where*** would the proposed action occur?
- ***How*** would the action take place and could it be broken down into components or a series of phases?

The proposed action should also contain the following elements, as appropriate and relevant to understanding the potential environmental effects:

- **Project Timing and Progression.** Information that identifies project milestones, the frequency and duration of activities, and any aspects of the proposed action that could result in effects that vary over time (e.g., time of day or season of the year) should be included.
- **Construction Activities.** Information on the number of construction workers involved and the type of equipment used; site clearing and grading requirements; use of temporary access roads, staging areas, and borrow sites; and any other activities that would be necessary to support construction should be described. This information is also relevant to the modification of existing facilities and infrastructure.
- **Operational Activities.** Information on the project and related support operations, such as facilities, equipment, and materials to be used; numbers of personnel involved; any testing, training, and maintenance activities; utility demands; and related transportation requirements, should be included.

The description of the proposed action in an EA or EIS should be straightforward and concise, but sufficiently detailed to form the basis for the analysis that will follow.

It is important that the description of the proposed action include all "connected actions" (if the action is dependent on or part of one or more other actions) and that it acknowledge any "similar actions" (if the proposed action is similar to existing activities or recent or pending actions). Understanding similar actions is particularly useful when determining the potential for the proposed action to produce cumulative effects (see Sections 4.11.1 and 8.20).

In general, for both construction and operational activities, resulting waste streams and emissions (including rate and duration) should be identified, along with how they will be treated and/or disposed of. Maps, sketches, and facility layouts should be used as necessary to fully explain the details of the proposed action. In addition, standard construction practices and ARNG-required procedures and mitigation measures, if already planned as part of the proposed action, should be described, along with other mitigation measures that will likely be required if the action is to proceed (e.g., scheduling activities so as not to affect the nesting season for a migratory endangered bird species).

4.7 Determining Alternatives

Alternatives represent the various ways the ARNG can fulfill the purpose and need that would be fulfilled by initiating a proposed action. Typically, a statement of a proposed action should be a totally objective proposal that reflects only one of several possible means to an end. After the proponent has prepared a detailed description of the proposed action, all reasonable alternatives (in terms of actions and/or locations) should be explored and considered. The proposed action may be, but does not necessarily have to be, the proponent's preferred alternative when the decision is made. Alternatives identified and selected as appropriate for analysis must be addressed throughout the document. In general, the range of reasonable alternatives is broader and the number of alternatives to be analyzed is greater in an EIS than in an EA. CEQ regulations (40 CFR 1502.14) recognize three types of alternatives:

- **No Action Alternative.** In accordance with CEQ and Army regulations, analysis of the "no action" alternative is required in all ARNG EAs and EISs throughout the documents. The no action alternative provides a baseline against which the effects of a proposed

action and all other alternatives are compared. Depending on the nature of the proposed action, there are three possible interpretations of "no action." The first pertains to a proposal or plan to update or change ongoing activities. In such a case, "no action" would be to not change the ongoing activity (to maintain the status quo). A second type of situation involves proposals for new projects. "No action" would mean that the proposed activity would not take place. A third possible situation occurs when certain ongoing actions at a site are to be discontinued (e.g., expiration of a lease, elimination of weapon system testing) prior to when a proposed action is to be implemented. This situation requires the "no action" alternative to take into account those changes in actions and the affected environment expected to result from discontinuing activities.

- **Other Reasonable Courses of Action.** CEQ regulations require a proponent to consider all reasonable alternatives that would fulfill its purpose and need for a proposed action. Reasonable alternatives include those which are practical or feasible from a technical and economic standpoint, support the underlying purpose of and need for the proposed action, and are ready for decision. The application of selection or screening criteria (e.g., budget constraints, time constraints, and specific training criteria) can sometimes help in narrowing the range of reasonable alternatives. Where such criteria are applied, they should be described in the NEPA document. An alternative may be considered reasonable even if it is outside the legal jurisdiction of the ARNG. A potential conflict with local, state, or federal law does not necessarily render an alternative unreasonable, although such conflicts must be considered. For some ARNG proposals, a very large number of reasonable alternatives might exist. In these situations, the NEPA analysis need evaluate only alternatives representative of the full range of reasonable alternatives (see CEQ *Forty Most Asked Questions*, Number 1 [Appendix C in this handbook]). Proponents are cautioned not to develop "bogus" alternatives simply to increase the number or "range" of alternatives.
- **Mitigation Measures Not Included in the Proposed Action.** Identified mitigation measures not already included in the proposed action provide opportunities for alternative means of implementing a proposed action (e.g., constructing noise barriers to lower noise levels even further below legal standards). These "add-on" mitigation measures must be analyzed for their potential environmental effects and may be treated as separate alternatives in the environmental analysis.

If alternatives that could appear obvious or have been identified by the public are determined to be unreasonable by the proponent and are to be eliminated from detailed study in the NEPA analysis, a brief discussion of the reasons for their elimination must be included in the document. Comparing alternatives against selection or screening criteria is recommended in this case.

Historically, the greatest potential cause for delay in the NEPA process is failing to adequately describe the proposed action and to appropriately address reasonable alternatives. Circulation of the DOPAA early in the process to all offices and organizations involved in the effort is critical to ensuring that all reasonable alternatives are identified and accurately defined. Identification of the full range of reasonable alternatives is a particularly important part of the scoping process. A decision maker cannot select an alternative that is not evaluated in an EA or EIS, and failure to consider alternatives that are reasonable can affect the credibility of an otherwise adequate NEPA analysis.

4.8 The Scoping Process

Scoping is an early and open process for actively and constructively bringing outside agencies

(federal, state, and local), organizations, and the public into the NEPA process; determining the scope of issues to be addressed; and identifying the major issues related to a proposed action. CEQ regulations and AR 200-2 require use of the scoping process when preparing an EIS. Use of a formal or informal scoping process is optional under current Army NEPA regulations (or NEPA regulations applicable to the ARNG) when preparing an EA, but in many cases it has proven beneficial, particularly in conducting coordination and consultation meetings with regulatory and natural resources agencies. As a minimum, some form of ARNG internal scoping should be used for EAs to ensure that the elements of the DOPAA are accurate and complete, and that any environmental issue or controversy associated with the action is identified.

Scoping during the early stages of the NEPA process provides focus to the analysis of potential environmental effects. Scoping sessions with individual agencies, federally recognized Indian tribes, and/or the public help proponents to identify a wide variety of important matters affecting the NEPA process, including community concerns, regulatory and natural resources agency concerns, information related to impact significance, environmental justice issues, the geographic extent of the affected area, the range of actions (connected, cumulative, or similar) and alternatives, the range of resulting effects (direct, indirect, and cumulative), permit and consultation requirements, possible mitigation strategies, and appropriate levels and sequence of environmental reviews.

AR 200-2 provides guidance and specifies requirements for the scoping process. Specific guidance on scoping and public involvement from the NGB is provided in Appendix U. In addition, Appendices D and E contain scoping guidance developed by the CEQ.

4.9 Identifying Issues for Analysis

Issues to be considered in NEPA analyses are derived from an understanding of those environmental resources and resource components that would affect and would be affected by the proposed action or an alternative if it was implemented. Such issues are based on the interrelationship between the proposed activities, the affected area, the resulting effects, receptors of the effects, criteria and regulatory standards against which effects are measured, and time. Issues can be characterized by their extent of geographic distribution, the duration of time over which the issues are likely to be of interest, and the level of interest or controversy they generate. Once identified, the issues can be grouped and categorized (e.g., common resources, common geography, linked to the same action, or linked to cause-effect relationships) for purposes of providing focus and direction to the scope of analysis and NEPA documentation. This approach is particularly useful in determining which resources and resource parameters should be addressed in the Affected Environment and Environmental Consequences sections of an EA or an EIS (see Sections 6.5 and 7.7, respectively).

Issues can be identified by a variety of methods, including surveys and questionnaires, coordinated discussions with outside participants (e.g., natural resources agencies, local officials, and special interest groups), research of existing technical documents and journals, and review of published and electronic news media. The scoping process, previously described, provides an effective forum for issue identification. Issues can also be identified from cause-and-effect relationships. Figure 4-1 schematically captures the cause-and-effect relationship for a hypothetical road/trail construction project, in which a variety of both direct and indirect effects flow from a single action or cause. It should be noted that the effects chain presented in this figure does not address the full range of environmental and socioeconomic categories for this or any other project.

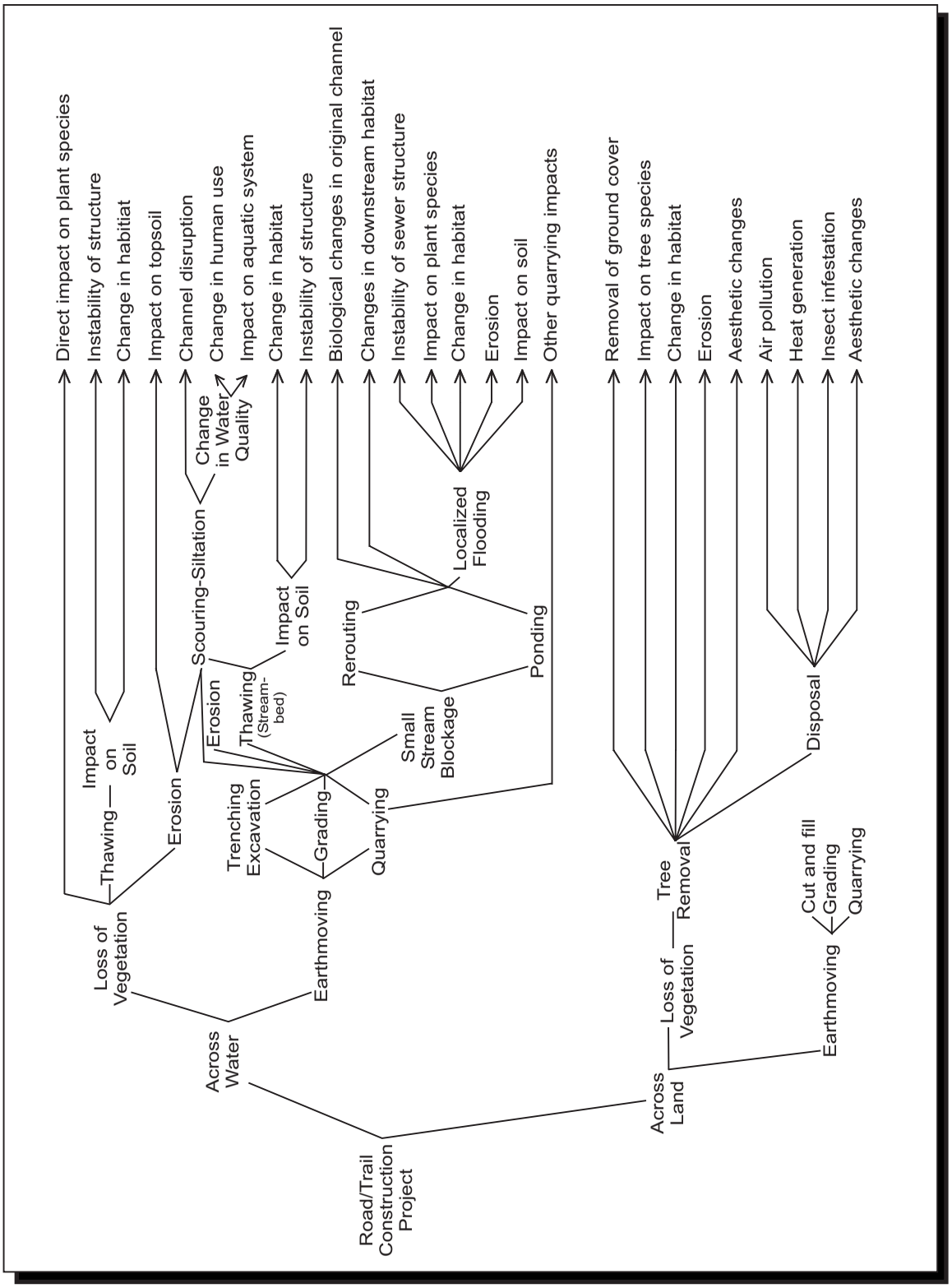

Figure 4-1. Cause-Effect Relationships for a Road/Trail Construction Project

The eventual resolution of issues is often achieved through the development of mitigation measures where significant effects or serious controversy is anticipated. Agreements on approaches for handling issues should be reached early (e.g., during scoping) through coordination and consultation with key ARNG and NGB participants, technical support staff and contractors, environmental experts in other agencies, and the affected public.

4.10 Describing the Affected Environment

Once the environmental issues have been identified, an Affected Environment description (also referred to as the environmental baseline) can be prepared for the area(s) that could be affected by the ARNG's proposed action and alternative actions. CEQ regulations (40 CFR 1502.15) require that Affected Environment descriptions presented for each resource area be succinct and no longer than is necessary to understand the resulting effects. The data and information presented should be commensurate with the importance of the effects, with less important material summarized, consolidated, or simply referenced. A good rule of thumb is that any information presented in the Affected Environment section of an EA or EIS should be directly related to the Environmental Consequences section.

Based on the extent and duration of anticipated effects caused by an action, the description of each relevant resource area should be defined according to some geographic boundary or "affected area" and the general time frame within which effects are likely to occur. Each resource area presented in the Affected Environment description should have its own distinct affected area, which can be explained in text or delineated on a map. However, an option for describing several of the more common resources (e.g., land use, soils, and vegetation) is to use one study area boundary (e.g., the installation or other property boundary, or a designated circle around the project site) that encompasses the potential effects for *all* of them. This approach can help to simplify the process of delineating individual affected areas, particularly in the early stages of the analysis when the definition of the proposed action might still be changing. It can also provide a common frame of reference for discussion and for the presentation of data on maps or other visual aids used in the NEPA document. Some resources, such as socioeconomics[12] and air quality, typically have affected areas much larger (e.g., a metropolitan area or regional airshed) than those for other resources because of the factors used in measuring effects on them. The geographic scope of potential cumulative effects on various resources can also require much larger areas of study.

When describing the Affected Environment, it is recommended that the most current data available, or other data that closely represent current conditions, be used. If existing data do not accurately represent current conditions, new data might need to be obtained through field surveys or by other means. (In cases of incomplete or unavailable data, refer to 40 CFR 1502.22.) Depending on the time frame of a given action, the Affected Environment description for some resources might require projections of future conditions to more accurately determine long-term effects or effects not expected to occur for several years. This is particularly true for programmatic and life-cycle NEPA studies and typically applies to future land use, socioeconomic, infrastructure, and transportation conditions. As described in Sections 1.6.4, 1.6.5, and 1.6.7, tiered and/or supplemental NEPA studies for such actions are usually required to account for changing phases of the action and/or changes in the Affected Environment.

[12] Another term often used exclusively in describing the "affected area" for *socioeconomics* is "region of influence," or ROI (see Section 8.17 of this handbook).

All too often, NEPA documents are completed using insufficient information for evaluating effects on environmental baseline conditions. In some cases, expensive and time-consuming field data collection is necessary, but the specific project for which the data are needed has insufficient funds and/or time for data collection and analysis efforts. In other cases, data might be available but not in a form that can be easily integrated with other information or analysis techniques. To help prevent such problems from occurring, early planning is necessary to determine resource issues and associated baseline data requirements. Much of the existing baseline data can usually be obtained through coordination with the Environmental Program Manager, other state ARNG offices, the NGB-ARE, and various outside agencies.

Some Army and ARNG installations have developed or are developing extensive environmental databases, usually in the form of automated geographic information systems (GIS), to define existing baseline conditions at those locations. In addition to providing information used in NEPA analyses, such tools can also be used to generate "environmental constraints maps" to help master planners, trainers, and other proponents in siting and scheduling their proposed actions. To assist installation staff with the application of a GIS or other geographic data system, the Army Assistant Chief of Staff for Installation Management has sponsored development of the Real Property Management Tool, *Applying GIS Technology to Installation Management Implementation Guide*, which is available on the Internet at http://sdcw.army.mil/sbis_ism/ism_sbis.html.[13] The guide identifies the benefits of using a geographic data system and defines steps to be followed to implement such a system at an installation.

GIS can be used to do preliminary planning for any projects that require NEPA documentation. GIS is particularly useful in developing alternative locations for a proposed project. NEPA documentation must include maps produced using GIS. The maps must meet current professional or industry standards for GIS. The maps must at a minimum include an overview map of the proposed project location (installation-wide map with the project area noted [1:24,000]). A more detailed map (1:2400) dedicated to each alternative project location must also be developed. Maps must include the following (when available): installation boundary, roads, vegetation, buildings, contour lines, aerial photography, flora and fauna, and any affected resources such as natural and cultural resources, wetlands, threatened and endangered species, and noise contours (when appropriate). A copy of all GIS data used in the NEPA document must be included on the CD-ROM in shapefile format with the required metadata. NEPA documents submitted to NGB-ARE and containing poor-quality maps or incomplete data on CD-ROMs will be returned to the initiating ARNG.

4.11 Determination of Effects

4.11.1 Types of Effects

The CEQ regulations (40 CFR 1508.18) direct that environmental effects resulting from major federal actions be analyzed for three types of effects—direct, indirect, and cumulative. Both EAs and EISs must include analysis for all three types, which are described below. (Note: The CEQ regulations use the terms *effects* and *impacts* synonymously and interchangeably.)

- **Direct Effects.** A direct effect is caused by the action and occurs at the same time and place (40 CFR 1508.8). Direct effects are typically the most obvious to ascertain. Their

[13] G. Brewer, A Guide to Improved Installation Operations, *Public Works Digest*, November 1997.

analysis is usually more objective, and they are the simplest to assess. An example of a direct effect is the loss of vegetative habitat from construction of a new road.

- **Indirect Effects.** An indirect effect is caused by the action but occurs later in time or farther removed in distance, although it is still reasonably foreseeable (40 CFR 1508.8). Indirect effects may include growth-inducing effects and other effects related to induced changes in the pattern of land use, population density, or growth rate, and related effects on air and water resources and on ecosystems. For example, in the case of sediment runoff from a construction site, the resulting deterioration of water quality downstream represents an indirect adverse effect. Indirect effects are not as apparent as direct effects, and their evaluation may depend on subjective rather than objective factors.

- **Cumulative Effects.** A cumulative effect produces an "impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (federal or nonfederal) or person undertakes such other actions" (40 CFR 1508.7). Cumulative impact analysis captures the effects that result from the action in combination with the effects of other actions taken during the duration of the proposed action in the same geographic area. Because of extensive outside influences, cumulative effects are the most difficult to analyze, and the analysis is frequently more subjective than objective. For further discussion on addressing cumulative effects, see Section 8.20.

When identifying direct, indirect, and cumulative effects, consideration also must be given to whether they represent short-term or long-term effects. Short-term effects are often those associated with the initial implementation of an action, such as those which might result from initiation of a construction project. Long-term effects are generally those which would occur over the operational life of the project.

4.11.2 Significance of Effects

The CEQ regulations specify that in determining the significance of effects, consideration must be given to both "context" and "intensity" (40 CFR 1508.27). Context refers to the significance of an effect to society as a whole (human and national), to an affected region, to affected interests, or to just the locality. Intensity refers to the magnitude or severity of the effect, whether it is beneficial or adverse. The significance of potential direct, indirect, and cumulative effects must be determined through a systematic evaluation of the action, alternatives, and mitigation measures in terms of their effects on each individual environmental resource component (e.g., ecosystems, water resources, and air quality). Evaluation of significance is typically based on an assumption that the full effect of the predicted condition would occur all at once. In reality, the projected conditions likely would be less intense than the maximum and also would be likely to happen incrementally rather than all at once. Thus, actual effects might well be less severe than those predicted and described in the NEPA analysis.

Sections 6.5 and 7.7 provide detailed descriptions of resource areas typically included in ARNG NEPA analyses for both EAs and EISs, respectively. It is important to note that only those resources and resource parameters that present issues for analysis (see Section 4.9) need be discussed. Examples of significance criteria for these resource areas are as follows:

- **Land Use.** If an alternative would conflict with adopted plans and goals of the community or if it would result in a substantial alteration of the present or planned land use of an area, it could have a significant direct effect. If an alternative would result in substantial new development or prevent such development elsewhere, it could have a significant indirect effect. In addition, an alternative could significantly affect visual

resources if it resulted in abrupt changes to the complexity of the landscape and skyline (in terms of vegetation, topography, or structures) when viewed from points readily accessible by the public.

- **Air Quality.** An alternative could have a significant air quality effect if it would result in substantially higher air pollutant emissions or cause air quality standards to be exceeded.
- **Noise.** An alternative could have a significant noise effect if it would generate new sources of substantial noise, increase the intensity or duration of noise levels to sensitive receptors, or result in exposure of more people to high levels of noise.
- **Geology and Soils.** If an alternative would result in an increased geologic hazard or a change in the availability of a geologic resource, it could have a significant effect. Such geologic and soil hazards would include, but not be limited to, seismic vibration, land subsidence, and slope instability.
- **Water Resources.** If an alternative would result in a reduction in the quantity or quality of water resources for existing or potential future uses, it could have a significant effect. Based on existing water rights, a significant effect would occur if the demand exceeded the capacity of the potable water system. An alternative also could have a significant effect on water resources if it would cause substantial flooding or erosion, if it would subject people or property to flooding or erosion, or if it would adversely affect a significant water body, such as a stream or lake.
- **Biological Resources.** The effect of an alternative on biological resources and ecosystems could be significant if it would disrupt or remove any endangered or threatened species or its habitat, its migration corridors, or its breeding areas. The loss of a substantial number of individuals of any plant or animal species (sensitive or nonsensitive species) that could affect the abundance or diversity of that species beyond normal variability could also be considered significant. The measurable degradation of sensitive habitats, particularly wetlands, could also be significant.
- **Cultural Resources.** An alternative could have a significant effect on cultural resources if it would result in unauthorized artifact collecting or vandalism of identified important sites; if it would modify or demolish a historic building or environmental setting; or if it would promote neglect, resulting in resource deterioration or destruction, audio or visual intrusion, or decreased access to traditional Native American resources. Impact assessment for cultural resources focuses on properties that are listed in or considered eligible for the National Register of Historic Places or are National Historic Landmarks, as well as resources that are considered sensitive by Native American groups.
- **Socioeconomics.** If an alternative would substantially alter the location and distribution of the population within the geographic "region of influence," cause the population to exceed historical growth rates, or substantially affect the local housing market and vacancy rates, the effect would be significant. Significant effects could occur if an alternative caused disproportionate risks to children that resulted from environmental health risks or safety risks. In addition, an alternative could have a significant effect if it would create a need for new or increased fire or police protection, or medical services, beyond the current capability of the local community, or would decrease public service capacities so as to jeopardize public safety. It is important to note that, per CEQ regulations (40 CFR 1508.14), social or economic effects are not intended by themselves to require preparation of an EIS. Only when social or economic effects are interrelated with natural or physical environmental effects will all of these effects be analyzed as part of the NEPA process.

- **Environmental Justice.** Significant effects could occur if an alternative would disproportionately affect minority or low-income populations.
- **Infrastructure.** An alternative could have a significant effect on infrastructure if it would increase demand over capacity, requiring a substantial system expansion, or if it would result in substantial system deterioration over the current condition. For instance, an alternative could have a significant effect on traffic if it would increase the volume of traffic beyond the existing road capacity, cause parking availability to fall below minimum local standards, or require new or substantially improved roadways or traffic control systems.
- **Hazardous and Toxic Materials/Wastes.** An alternative could have a significant effect if it would result in a substantial increase in the generation of hazardous substances, increase the exposure of persons to hazardous or toxic substances, increase the presence of hazardous or toxic materials in the environment, or place substantial restrictions on property use due to hazardous waste, materials, or site remediation.

Other factors that should be considered when evaluating significance are listed below:

- **Relevant Legal Requirements.** Legal requirements should be considered in determining significance. Such criteria might appear in local, state, or federal statutes, regulations, or court decisions. Actions that are likely to result in violation of regulatory standards are usually considered to have significant effects.
- **Knowledge of Applicable Court Cases.** Findings in court cases involving NEPA can often provide guidance in understanding the types of effects likely to be considered significant. However, a single court case might not be an up-to-date, definitive statement of the law. Legal counsel at the state ARNG or NGB level should be consulted, as necessary.
- **Uncertainty and Controversy.** The degree to which the effects of the action on the human environment are likely to be highly uncertain or controversial should be considered.
- **Other Considerations.** Specific unique characteristics of the action might influence the determination of significance. The level of significance might need to be determined by using the advice and judgment of environmental office personnel, natural or cultural resource agency staff, contractors, and others, as well as by using established guidelines that are generally accepted by experts in a given discipline.

4.11.3 Describing Effects

In describing potential effects that might result from the implementation of a proposed action, the following guidelines should be considered:

- Quantify effects as much as possible using appropriate units of measure (e.g., acres of habitat lost and tons of sediment entering a stream). If an effect is obviously negligible (e.g., the effects of barracks construction on the ozone layer), it should be ignored unless a specific public comment demands an answer.
- When only impact trends can be indicated (e.g., low, moderate, high, etc.), provide careful explanation and interpretation of qualifiers (e.g., numerical range or list of possible site conditions that would represent each qualifier used).
- Although determining the significance of effects can, in many cases, be subjective, it can be semi-quantified in such terms as the number of people affected, the proportion of

resources degraded, the rate at which conditions will become worse, key linkages to other more quantifiable resources at risk, and the level or extent of irreversibility of or recoverability from an impact.[14] Determining significance is not, however, subjective in cases where an established regulatory threshold is broken; such cases are usually presumed to be significant.

- Be cautious in using the word *significant* or *significantly*. If such words are used, explain them in terms of context and intensity. In an EIS, use of *significant* or *significantly* is a proper indication for disclosing significant effects (the main purpose for preparing an EIS). In an EA, however, use of *significant* or *significantly* for even a single resource, and even when not discussing adverse effects, can create a perception, in a legal context, that the EA should have been an EIS.[15] For similar reasons of perception, the term *effect* rather than *impact* is generally preferable for use in an EA. *Significant*, *significantly*, and *impact* may, however, be appropriately used in the FNSI.
- Address environmental effects or controversy in proportion to their potential significance. That is, focus the analysis and discussion on those issues and associated effects identified through scoping as being most relevant to the proposed action and of greatest concern to the public.
- Identify and explain where there are instances of incomplete or unavailable data, or where confidence levels are extremely low. Give an honest and realistic appraisal of the effects on all resources.[16] The CEQ regulations (40 CFR 1502.22) provide further guidance on this issue.
- Do not use regional, national, or global comparisons of effects to trivialize the significance of a local effect. On the other hand, do not use local significance to give undue weight to trivial matters.
- Conduct impact analyses to discriminate among individual alternatives. Do not present a single maximum potential effects estimate that obscures differences between alternatives.
- Avoid describing effects that are severe without also describing the likelihood (probability or level of risk) of their occurrence.

4.12 Administrative Record

The Administrative Record is the entirety of the information and data relied on to prepare the EA or EIS. The record includes all data, information, and analysis either generated by other sources or obtained from other sources used to support the analysis and documentation. It is essentially the agency's file as it relates to the action, and it can become the backup data used in court proceedings to validate the NEPA process and support the agency's decision.

The proponent is responsible for compiling the Administrative Record throughout the preparation of the NEPA document. In the event the decision on the proposed action or the process leading to the decision is challenged, time allowed for assembly and delivery of the Administrative Record might be short. Government counsel, representing the interests of the United States, will require

[14] R.A. Carpenter, Cumulative Effects Analysis (CEA) in the NEPA Process, 1995. Presented at the Department of Energy/CEQ Conference Commemorating the 25th Anniversary of NEPA.

[15] L.H. Freeman, *How to Write Quality EISs and EAs: Guidelines for NEPA Documents* (Shipley Associates, Bountiful, Utah, 1992).

[16] Ibid.

speedy delivery of the Administrative Record for their review and evaluation (and possible redaction of privileged materials) before making the record available to plaintiffs. Timely response by the proponent, as the initial source of the Administrative Record, is essential.

The proponent or, at the proponent's behest the preparer, should organize the data and information composing the record as a current, accessible file, indexed by topic, to the extent practicable. A complete Administrative Record should include project-related information within the possession of the proponent and/or lead agency (and any contractor). It should also identify any other reference materials used in preparing the document but available only from outside sources (e.g., copyrighted documents at public libraries). Communications of all types (e.g., memoranda, internal notes, telephone conversation records, letters, and minutes of meetings) are typically included, along with public outreach materials, such as newsletters, newspaper advertisements (include affidavits of publication), and other public notices. Data sources that should be part of the Administrative Record include maps (e.g., wetlands, endangered species ranges, habitat, surface water, geology, topography, and land use), drawings (e.g., "as-builts" for roadways and for drainage, water, sewerage, and electrical systems), studies, reports, documents, appraisals, special data compilations, modeling results, correspondence from subject matter experts, or other types of written information that were relied on during the environmental analysis and decision-making process. All references cited in the NEPA document should be traceable to the Administrative Record.

A comprehensive Administrative Record is essential to successfully defending the proponent's position in litigation. When a plaintiff files a complaint, the Department of Justice immediately enters the picture, without the benefit of knowing all the history and background concerning the proposed action. The first few weeks of litigation are crucial, and no resource better postures the government's attorneys than the Administrative Record. The Administrative Record may be developed and maintained by a contractor during preparation of the NEPA documentation. After the decision is rendered, it is to be kept by the proponent (not a contractor).

Appendix X is guidance on compiling the Administrative Record provided by the Department of Justice to NGB and other federal agencies. Proponents, whether preparing an EA or EIS, should be familiar with the contents of the guidance and must be prepared to respond when circumstances so dictate.

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5.0 CATEGORICAL EXCLUSIONS AND RECORDS OF ENVIRONMENTAL CONSIDERATION

5.1 Categorical Exclusions

A Categorical Exclusion, or CX, is a category of actions adopted by a federal agency that do not individually or cumulatively have a significant effect on the human environment and do not require an EA or an EIS. A CX is intended to reduce delays in initiating and completing certain actions and to minimize the amount of paperwork associated with those actions. Determining when a CX might apply to a proposal is part of the decision-making process associated with actions that might affect the environment.

In accordance with CEQ regulations (40 CFR 1507.3 and 1508.4), every federal agency may adopt a list of CXs. Each agency is responsible for determining what types of its actions should be categorically excluded and for developing specific regulations regarding the use of CXs. The Army's list of categorically excluded actions is shown in Table 5-1 (see also Appendix B of AR 200-2).

TABLE 5-1. LIST OF CATEGORICAL EXCLUSIONS

Administration/operation activities:

1. Routine law and order activities performed by military/military police and physical plant protection and security personnel. This also includes civilian natural resources and environmental law officers.
2. Emergency or disaster assistance provided to federal, state, or local entities (REC required).
3. Preparation of regulations, procedures, manuals, and other guidance documents that implement, without substantive change, the applicable HQDA or other federal agency regulations, procedures, manuals, and other guidance documents that have been environmentally evaluated (subject to previous NEPA review).
4. Proposed activities and operations to be conducted in an existing nonhistoric structure which are within the scope and compatibility of the present functional use of the building, will not result in a substantial increase in waste discharged to the environment, will not result in substantially different waste discharges from current or previous activities, and emissions will remain within established permit limits, if any (REC required).
5. Normal personnel, fiscal, and administrative activities involving military and civilian personnel (recruiting, processing, paying, and records keeping).
6. Routinely conducted recreation and welfare activities not involving off-road recreational vehicles.
7. Deployment of military units on a temporary duty (TDY) or training basis where existing facilities are used for their intended purposes consistent with the scope and size of existing mission.
8. Preparation of administrative or personnel-related studies, reports, or investigations.
9. Approval of asbestos or lead-based paint management plans drafted in accordance with applicable laws and regulations (REC required).
10. Non-construction activities in support of other agencies/organizations involving community participation projects and law enforcement activities.
11. Ceremonies, funerals, and concerts. This includes events such as state funerals, to include flyovers.
12. Reductions and realignments of civilian and/or military personnel that: fall below the thresholds for reportable actions as prescribed by statute (10 U.S.C. 2687) and do not involve related activities such as construction, renovation, or demolition activities that would otherwise require an EA or an EIS to implement (REC required). This includes reorganizations and reassignments with no changes in force structure, unit redesignations, and routine administrative reorganizations and consolidations (REC required).
13. Actions affecting Army property that fall under another federal agency's list of categorical exclusions when the other federal agency is the lead agency (decision maker), or joint actions on another federal agency's property that fall under that agency's list of categorical exclusions (REC required).

TABLE 5-1. LIST OF CATEGORICAL EXCLUSIONS

14. Relocation of personnel into existing federally owned or commercially leased space, which does not involve a substantial change in the supporting infrastructure (for example, an increase in vehicular traffic beyond the capacity of the supporting road network to accommodate such an increase is an example of substantial change) (REC required).

Construction and demolition:

1. Construction of an addition to an existing structure or facility, and new construction on a previously developed site or on a previously undisturbed site if the area to be disturbed has no more than 5.0 cumulative acres of new surface disturbance. This does not include construction of facilities for the transportation, distribution, use, storage, treatment, and disposal of solid waste, medical waste, and hazardous waste (REC required).
2. Demolition of nonhistoric buildings, structures, or other improvements and disposal of debris therefrom, or removal of a part thereof for disposal, in accordance with applicable regulations, including those regulations applying to removal of asbestos, polychlorinated biphenyls (PCBs), lead-based paint, and other special hazard items (REC required).
3. Road or trail construction and repair on existing rights-of-ways or on previously disturbed areas.

Cultural and natural resource management activities:

1. Land regeneration activities using only native trees and vegetation, including site preparation. This does not include forestry operations (REC required).
2. Routine maintenance of streams and ditches or other rainwater conveyance structures (in accordance with U.S. Army Corps of Engineer's permit authority under Section 404 of the Clean Water Act and applicable state and local permits), and erosion control and storm water control structures (REC required).
3. Implementation of hunting and fishing policies or regulations that are consistent with state and local regulations.
4. Studies, data collection, monitoring and information gathering that do not involve major surface disturbance. Examples include topographic surveys, bird counts, wetland mapping, and other resources inventories (REC required).
5. Maintenance of archeological, historical, and endangered/threatened species avoidance markers, fencing, and signs.

Procurement and contract activities:

1. Routine procurement of goods and services (complying with applicable procedures for sustainable or "green" procurement) to support operations and infrastructure, including routine utility services and contracts.
2. Acquisition, installation, and operation of utility and communication systems, mobile antennas, data processing cable, and similar electronic equipment that use existing right-of-way, easement, distribution systems, and/or facilities (REC required).
3. Conversion of commercial activities under the provisions of AR 5-20. This includes only those actions that do not change the actions or the missions of the organization or alter the existing land-use patterns.
4. Modification, product improvement, or configuration engineering design change to materiel, structure, or item that does not change the original impact of the materiel, structure, or item on the environment (REC required).
5. Procurement, testing, use, and/or conversion of a commercially available product (for example, forklift, generator, chain saw, etc.) which does not meet the definition of a weapon system (part 15, DODI 5000.2), and does not result in any unusual disposal requirements.
6. Acquisition or contracting for spares and spare parts, consistent with the approved Technical Data Package (TDP).
7. Modification and adaptation of commercially available items and products for military application (for example, sportsman's products and wear such as holsters, shotguns, sidearms, protective shields, etc.), as long as modifications do not alter the normal impact to the environment (REC required).
8. Adaptation of nonlethal munitions and restraints from law enforcement suppliers and industry (such as rubber bullets, stun grenades, smoke bombs, etc.) for military police and crowd control activities where there is no change from the original product design and there are no unusual disposal requirements. The development and use by the military of nonlethal munitions and restraints which are similar to those used by local police forces and in which there are no unusual disposal requirements (REC required).

TABLE 5-1. LIST OF CATEGORICAL EXCLUSIONS

Real estate activities:

1. Grants or acquisitions of leases, licenses, easements, and permits for use of real property or facilities in which there is no significant change in land or facility use. Examples include, but are not limited to, Army-controlled property and Army leases of civilian property to include leases of training, administrative, general use, special purpose, or warehouse space (REC required).
2. Disposal of excess easement areas to the underlying fee owner (REC required).
3. Transfer of real property administrative control within the Army, to another military department, or to other federal agency, including the return of public domain lands to the Department of Interior, and reporting of property as excess and surplus to the General Services Administration for disposal (REC required).
4. Transfer of active installation utilities to a commercial or governmental utility provider, except for those systems on property that has been declared excess and proposed for disposal (REC required).
5. Acquisition of real property (including facilities) where the land use will not change substantially or where the land acquired will not exceed 40 acres and the use will be similar to current or ongoing Army activities on adjacent land (REC required).
6. Disposal of real property (including facilities) by the Army where the reasonably foreseeable use will not change significantly (REC required).
7. Acquisition of land for restoration of off-post contamination, in accordance with CERCLA (REC required).

Repair and maintenance activities:

1. Routine repair and maintenance of buildings, airfields, grounds, equipment, and other facilities. Examples include, but are not limited to: removal and disposal of asbestos-containing material (for example, roof material and floor tile) or lead-based paint in accordance with applicable regulations; removal of dead, diseased, or damaged trees; and repair of roofs, doors, windows, or fixtures (REC required for removal and disposal of asbestos-containing material and lead-based paint or work on historic structures).
2. Routine repairs and maintenance of roads, trails, and firebreaks. Examples include, but are not limited to: grading and clearing the roadside of brush with or without the use of herbicides; resurfacing a road to its original conditions; pruning vegetation, removal of dead, diseased, or damaged trees and cleaning culverts; and minor soil stabilization activities.
3. Routine repair and maintenance of equipment and vehicles (for example, autos, tractors, lawn equipment, military vehicles, etc.) except depot maintenance of military equipment, which is substantially the same as that routinely performed by private sector owners and operators of similar equipment and vehicles.

Hazardous materials/hazardous waste management and operations:

1. Use of gauging devices, analytical instruments, and other devices containing sealed radiological sources; use of industrial radiography; use of radioactive material in medical and veterinary practices; possession of radioactive material incident to performing services such as installation, maintenance, leak tests, and calibration; use of uranium as shielding material in containers or devices; and radioactive tracers (REC required).
2. Immediate responses in accordance with emergency response plans (for example, Spill Prevention Control and Countermeasure Plan (SPCCP)/Installation Spill Contingency Plan (ISCP), and Chemical Accident and Incident Response Plan) for release or discharge of oil or hazardous materials/substances; or emergency actions taken by Explosive Ordnance Demolition (EOD) detachment or Technical Escort Unit.
3. Sampling, surveying, well drilling and installation, analytical testing, site preparation, and intrusive testing to determine if hazardous wastes, contaminants, pollutants, or special hazards (for example, asbestos, PCBs, lead-based paint, or unexploded ordnance) are present (REC required).
4. Routine management, to include transportation, distribution, use, storage, treatment, and disposal of solid waste, medical waste, radiological and special hazards (for example, asbestos, PCBs, lead-based paint, or unexploded ordnance), and/or hazardous waste that complies with EPA, Army, or other regulatory agency requirements. This CX is not applicable to new construction of facilities for such management purposes.
5. Research, testing, and operations conducted at existing enclosed facilities consistent with previously established safety levels and in compliance with applicable federal, state, and local standards. For facilities without existing NEPA analysis, including contractor-operated facilities, if the operation will substantially increase the extent of potential environmental impacts or is controversial, an EA (and possibly an EIS) is required.
6. Reutilization, marketing, distribution, donation, and resale of items, equipment, or materiel; normal transfer of

TABLE 5-1. LIST OF CATEGORICAL EXCLUSIONS

items to the Defense Logistics Agency. Items, equipment, or materiel that have been contaminated with hazardous materials or wastes will be adequately cleaned and will conform to the applicable regulatory agency's requirements.
Training and testing:
1. Simulated war games (classroom setting) and on-post tactical and logistical exercises involving units of battalion size or smaller, and where tracked vehicles will not be used (REC required to demonstrate coordination with installation range control and environmental office).
2. Training entirely of an administrative or classroom nature.
3. Intermittent on-post training activities that involve no live fire or vehicles off established roads or trails. Uses include, but are not limited to, land navigation, physical training, Federal Aviation Administration (FAA) approved aerial overflights, and small unit level training.
4. Development/operational testing and demonstrations of new equipment at a government or commercial facility where the tests are conducted in conjunction with normal development or operational activities that have been previously assessed in an Army document pertaining to those operations.
Aircraft and airfield activities:
1. Infrequent, temporary (less than 30 days) increases in air operations up to 50 percent of the typical installation aircraft operation rate (REC required).
2. Flying activities in compliance with Federal Aviation Administration Regulations and in accordance with normal flight patterns and elevations for that facility, where the flight patterns/elevations have been addressed in an installation master plan or other planning document that has been subject to NEPA public review.
3. Installation, repair, or upgrade of airfield equipment (for example, runway visual range equipment, visual approach slope indicators).
4. Army participation in established air shows sponsored or conducted by non-Army entities on other than Army property.

Any proposed changes or modifications to the list of exclusions must be submitted to ODEP. If additional CXs are approved, the Army publishes them in the *Federal Register*. Categorical Exclusions from another federal agency may be applied to only those ARNG actions to which the other agency's NEPA implementing regulations apply and only when the other agency concurs with the approach (e.g., when the ARNG proposes to use another federal agency's property). In such cases, obtaining formal written acceptance of this approach from the other agency is highly recommended.

The steps involved in determining the applicability of ARNG CXs to proposed actions are described in the following sections.

5.1.1 Screening Criteria

The first step in determining whether a CX might be applicable for a proposed action is to review the screening criteria listed in AR 200-2. All screening criteria must be met for the proposed action to be categorically excluded. If any of the criteria are not satisfied, the action requires an EA or an EIS to assess potential effects. The following are the screening criteria ARNG proponents are to consider:

- The action is not a major federal action significantly affecting the quality of the human environment.
- There are minimal or no individual or cumulative effects on the environment as a result of the action.

- There is no environmentally controversial change to existing environmental conditions.
- No extraordinary conditions are associated with the project.
- The project does not involve use of unproven technology.
- The project involves no greater scope or size than is normal for this category of action.
- There is no potential of an already poor environment's being further degraded (see Section 8.20, Cumulative Effects Analysis).
- The action does not degrade an environment that remains close to its natural condition.
- There are no threatened or endangered species (or critical habitat), significant archeological resources, National Register or National Register-eligible historic sites, or other statutorily protected resources.
- The action will not adversely affect prime or unique agricultural lands, wetlands, coastal zones, wilderness areas, aquifers, floodplains, wild and scenic rivers, or other areas of critical environmental concern.

5.1.2 Categorically Excluded Actions

Assuming that a proposed action meets all the screening criteria listed in the preceding section, the next step in determining whether an action can be categorically excluded is to review the list of CXs presented in AR 200-2 and determine whether the proposed action properly falls into one or more CX categories. Proponents should also consider the sensitivity of the project and identify, to the extent possible, current and existing surrounding conditions as well as potential areas of controversy. These may include facility footprint, size, number of troops, and type of facility. Based on this review, a CX may be used to exclude a proposed action from further environmental analysis and documentation. If no CX is clearly applicable to the action, an EA or EIS *must* be prepared to assess potential effects. AR 200-2 also specifies when use of a CX must be supported by a Record of Environmental Consideration, or REC (see Section 5.2).

5.1.3 Extraordinary Circumstances

The final step to determine whether a proposed action may be categorically excluded is to see if "extraordinary circumstances" apply. When an action that normally would be categorically excluded (an action that matches one of the existing CX categories and meets all of the screening criteria) could, nonetheless, potentially have a significant effect on the human environment, extraordinary circumstances are said to exist. Application of a CX to the proposed action is not allowed, and an EA or an EIS must be prepared. Extraordinary circumstances are described in AR 200-2 and are summarized in the following:

- The proposed action would be greater in scope or size than what is normally experienced for the category of action.
- Implementation of the action would create a potential for degradation of already existing poor environmental conditions or the potential for initiation of a degrading influence, activity, or effect in areas not already significantly modified from their natural condition (see Section 8.20, Cumulative Effects Analysis).
- The action would involve employment of unproven technology.
- Threatened or endangered species or habitats, protected cultural resources, or other protected resources are present.

- Hazardous or toxic substances used in connection with the proposed action could come into contact with the surrounding natural environment.[17]
- The proposed action would affect critical environmental areas, including, but not limited to, prime or unique agricultural lands, wetlands, coastal zones, wilderness areas, aquifers, floodplains, or wild and scenic rivers.
- The following are some examples of proposed actions within the ARNG that are associated with extraordinary circumstances. The situations described, if implemented, could easily attract intense public scrutiny of the National Guard's activities, cause suspension of training activities, and possibly bring litigation upon the unit, state, and NGB. These examples reinforce the need for an interdisciplinary approach when conducting NEPA analyses for proposed ARNG actions.
- Construction of an armory on a hazardous waste dump site, previously used by a smelter and battery recycling company.
- Construction of an armory on a cemetery, where the ARNG project plans call for the relocation of human remains.
- Clear cutting 8-inch secondary growth trees from around an airfield and calling it routine maintenance.
- Building a rifle range next to an existing church and library.
- Restationing a helicopter battalion to a new airfield at which ARNG helicopters have never operated.
- Using CXs for separate but related actions.

5.1.4 Avoiding Misuse of CXs

Two CXs commonly used by the ARNG are CX A-5 and CX A-7. CX A-5 involves the "routine repair and maintenance of buildings, roads, airfields, grounds, equipment, and other facilities, to include the layaway of facilities, except when requiring application or disposal of hazardous or contaminated materials." CX A-7 includes "construction that does not significantly alter land use, provided the operation of the project when completed would not of itself have a significant environmental effect; this includes grants to private lessees for similar construction."

In considering the use of these (and any other) CXs, it is important to note that actions may not be segmented to use a CX for one or more parts (segments) of a larger, connected action (see Section 1.6.8, Segmenting and Sequencing). A CX also does not relieve the proponent from compliance with other environmental statutes related to the proposed action, such as the requirement for permits under the Clean Air Act or Clean Water Act, or coordination/consultation with the State Historic Preservation Officer and U.S. Fish and Wildlife Service. Care in applying screening criteria and attention to the possible existence of extraordinary circumstances related to a proposed action will reduce the likelihood of segmentation and other pitfalls often associated with the application of CXs.

[17] This use is to be distinguished from the use of hazardous and toxic materials under adequately controlled conditions within established laboratory buildings, for which AR 200-2 provides authority for categorical exclusion.

5.2 Record of Environmental Consideration

A REC is a signed statement that must be submitted with project documentation to show that the environment has been considered in planning for a particular action for which no separate EA or EIS is prepared. The use of certain CXs requires preparation of a REC (see Appendix B of AR 200-2). A REC is intended to reduce costs and paperwork while providing a mechanism to ensure the consideration of potential environmental effects. The REC must conclude that the action (1) is exempt from NEPA, (2) is already covered in an existing EA or EIS and determined not to be environmentally significant, or (3) qualifies for a CX.

The REC must describe the proposed action, state the time frame for the action, identify the proponent, and explain why further environmental analysis and documentation are not required. RECs may have attachments, such as graphics or maps, to describe the action adequately and assist reviewers in understanding the action and its lack of potential for environmental effects. The sample ARNG format for a REC is presented in Appendix Y.

The REC should be signed by the proponent for the action, the Environmental Program Manager, the private landowner (if any), and the Commander. Once a REC is complete, the installation keeps the documentation on file for a reasonable time following completion of the proposed action and mitigation measures (if any), which can take up to several years (e.g., multiyear training events and out-year construction projects). The following elements should appear in a REC:

- Title: (project/action)
- Description of Proposed Action: (including existing environmental setting)
- Anticipated Start Date and/or Duration of Proposed Action:
- It has been determined that the action:

  a. Is adequately covered in the existing EA (insert title/date)

  b. Is adequately covered in the existing EIS (insert title/date)

  c. After reviewing the Categorical Exclusions and the Screening Criteria listed in AR 200-2, it is determined that this action qualifies for Categorical Exclusion ____.

  d. Is exempt from NEPA requirements under the provision of: (cite superseding law)_____
- Signature (and date) of

  Proponent

  Others, as appropriate, concurring

  Landowner, Coordinator, etc.

  Environmental Programs Manager

  Facilities Division

  Plans and Operations

The ARNG has developed an Environmental Checklist (see Appendix L) to assist proponents, environmental staff, and others involved in planning and reviewing ARNG actions to determine the appropriate level of environmental documentation that a proposed action will require. Checklists are prepared by proponents, with input and assistance from other organizational staff

elements. States are encouraged to use an Environmental Checklist for reviewing all proposed actions, even where use of a CX not requiring preparation of a REC is contemplated.

Checklists prepared for candidate CX actions should be used in conjunction with, not as a substitute for, review of screening criteria and extraordinary circumstances described earlier.

All RECs submitted to NGB-ARE must be supported by the ARNG Environmental Checklist. The RECs and Environmental Checklists most frequently submitted to NGB relate to the CXs involving proposed construction projects, force structure reorganizations, and IRT projects.[18] Those for other proposed actions that are of a federal nature and are covered under one or more of the CXs described in AR 200-2 should be maintained in the state files. Copies of completed Environmental Checklists that conclude that the proposed action will require preparation of an EA or EIS should also be forwarded to the NGB as a means of initiating support for its participation in the NEPA process.

[18] Documentation for proposed construction projects should be routed through the NGB Installations Division (ARI) and then to NGB-ARE. For proposed changes in Force structure, documentation should be routed to the NGB Force Integration Division (ARF) and then to NGB-ARE. RECs and Environmental Checklists pertaining to IRT projects are to be submitted to NGB-ARO, which routes the documentation to NGB-ARE for staffing review.

6.0 ENVIRONMENTAL ASSESSMENT PREPARATION AND CONTENT

6.1 Introduction

This section is intended to guide ARNG proponents and document preparers through the EA process by establishing a greater level of consistency in the preparation of ARNG EAs. It focuses on preparing an EA and provides detailed information needed to develop this type of document.

The EA format the ARNG uses is based on the CEQ's regulations and guidance contained in AR 200-2. The CEQ's regulations provide for a considerable degree of agency flexibility in the EA analysis and documentation process. Although flexibility has allowed the ARNG to prepare or customize NEPA documents based on particular circumstances, over the years it has also resulted in the use of a variety of formats. ARNG participants in the NEPA process have indicated that a more structured, standardized format would greatly facilitate document preparation, training of new personnel, and, particularly, document review and approval.

Many of the same environmental resource areas and methodological approaches that apply to the analysis and documentation for an EIS also apply to an EA. A principal difference, however, is that the level of detail incorporated into an EA typically will be less than that of an EIS, particularly in cases where no significant effects are expected. An EA should provide only information and analysis sufficient to determine whether an action has no significant environmental effects or whether a more detailed analysis is required (40 CFR 1508.9). Although much of the data used in conducting the analysis for an EA might not be incorporated directly into the document, the information should still be included as part of the EA's administrative record (see Section 6.10) to show that appropriate resource issues were considered and the potential for significant environmental effects evaluated.

6.2 Time Line for an EA

Depending on the complexity of the proposed action, completing the EA process can take 6 to 12 months. ARNG policy is to establish a schedule that will ensure completion of the document in a timely and cost-effective manner. A schedule based on an approximate 10-month time frame is provided in Table 6-1 as an example of how the process is organized. This schedule assumes that the action is not controversial and does not have national interest. The milestone events indicated must occur regardless of the schedule. Actions proposed by HQDA or other organizations outside the ARNG could require review cycles and coordination times other than those shown. In addition, other factors can cause a NEPA document schedule to change dramatically, including slippage in review times, lack of an available baseline, and changes in elements of the DOPAA.

As specified in the NGB "All States" memorandum (Appendix G), the Draft EA package prepared by the state ARNG will be forwarded to the NGB, where it will be staffed. The comments will be evaluated and consolidated and the package returned to the state ARNG in approximately 45 days. The state ARNG will incorporate appropriate comments into the document prior to release for public comment. When the Draft EA has been completed, the proponent will make it available locally for a 30-day (minimum) public comment period. Requests for exceptions to this requirement should be directed to the NGB early in the EA process. (Refer to Section 6.8 for discussions on submitting such requests to the NGB.)

TABLE 6-1. SAMPLE TIME LINE FOR AN ENVIRONMENTAL ASSESSMENT

Milestone	Calendar Days from Project Initiation
Complete project coordination with NGB	0
Hold kickoff meeting	10
Complete draft description of proposed action and alternatives	25
Complete initial coordination/consultation with appropriate outside agencies (i.e., federal, state, local, and tribal)	40
Complete Internal Draft EA/begin staffing within state ARNG	60
Complete staffing of Internal Draft EA within state ARNG	70
Complete Preliminary Draft EA/begin staffing within NGB	75
Complete staffing/approval of Preliminary Draft EA within NGB	120
Publish and distribute Draft EA/begin public comment period	135
End 30-day public comment period	165
Complete Internal Final EA and Preliminary Draft FNSI (if applicable) and begin staffing within state ARNG (as necessary)	185
Complete staffing of Internal Final EA and Preliminary Draft FNSI within state ARNG	195
Complete Draft Final EA and Draft FNSI/begin staffing within NGB (as necessary)	200
Complete staffing/approval of Draft Final EA and Draft FNSI within NGB	245
Publish and distribute Final EA and FNSI/begin public review period	260
End 30-day public review period	290
Initiate action	291

Notification of a 30-day public comment process will be initiated by means of a display advertisement and legal notice published in at least one local newspaper of general circulation. Public notification for the Final EA and FNSI will be conducted using the same procedures as for the Draft EA. No action, other than planning on the proposal, may be taken for a minimum of 30 days following publication of the FNSI. If the FNSI is not contested within the 30-day public review period, either through legal action or substantive negative comments, the proposal may be initiated. Under certain circumstances specified in AR 200-2, the 30-day public review period can be reduced, with NGB approval, to no less than 15 days.

6.3 Document Development

To develop an EA successfully, the proponent must have a basic understanding of the major components of the document. AR 200-2 states that EAs should be no more than 25 pages in length. Within that framework, AR 200-2 identifies the major components of an EA as:

- Signature (Review and Approval) page.
- Purpose of and need for the action.
- Description of the proposed action.
- Alternatives considered.
- Affected environment.

- Environmental consequences.
- Conclusions regarding the effects of the proposed action.
- Listing of preparers, and agencies and persons consulted.
- References.

The basic components recommended for an ARNG EA are outlined in Section 6.5.

The EA should be well focused in each of its major components or sections. Writing style should be such that the document attains clarity and brevity but is still legally sufficient. ARNG preparers should use the following guidelines:

- Develop and follow an outline.
- Write clearly, concisely, and accurately.
- Provide only relevant information.
- Be consistent across all sections of the document.
- Use a checklist.[19]

Preparers should be careful not to "mix" discussions across subject areas inadvertently, unnecessarily increasing the length of the document and obscuring the line of thought for the analysis. Each section should be pure in its presentation of the subject matter. For instance, the section describing the proposed action should not include a discussion of alternatives to the proposed action. Similarly, the section describing the affected environment should focus only on baseline data (existing conditions) and should not include statements regarding potential impacts or findings. The environmental consequences section should analyze potential effects and should not include any supporting baseline data, which are reserved for the description of the affected environment.[20] These "crossovers" of technical sections in an EA are confusing to reviewers and decision makers and can require time-consuming and costly revisions.

EAs do not need to be detailed and lengthy if the effects are not likely to be significant. The information they contain should be presented as clearly and concisely as possible. When appropriate, existing documentation describing all or portions of the affected environment or other information applicable to describing the analysis results (e.g., technical research papers) may be incorporated by reference to help to cut down on the bulk of the EA (see also 40 CFR 1502.21). Because the audience is often not technically versed in all subject areas, the documents should be written in plain language. In addition, appropriate figures and graphics that support the text and can be easily interpreted by the public should be provided. Appendices should be used to support the main components of the EA, as appropriate. Whenever possible, technical editors should review the document to ensure accuracy, consistency, and readability.

[19] The ARNG uses a standard checklist to ensure that all components of an EA have been addressed in the document. A copy of this checklist is presented as Appendix RR in this handbook.

[20] This Handbook presents an alternative format for EAs in which the "affected environment" and "environmental consequences" sections are combined into a single section, with environmental resources and conditions described in separate subsections. See Section 6.6.

ARNG policy requires that EAs be prepared on recycled paper. The recycled paper symbol should be presented on the inside of the document cover. Draft and Final EAs should be printed double-sided to conserve paper.

6.4 Procedures for Supplemental EAs

Procedures for preparing, circulating, and filing a Supplemental EA are the same as those required for the original document, with the exception that any scoping conducted for the original EA need not be repeated. (See Section 1.6.5 for information on the application of supplemental documents.) Also, when preparing a supplemental EA, it is important to use those portions of the original document (through direct incorporation or incorporation by reference, rather than attaching the original document) that are still applicable and have not changed significantly. The preparer of the supplemental EA can then focus any new data collection, analysis, and documentation efforts on the proposed actions, resources, and resource issues that have changed. Maximizing use of existing information simplifies the overall EA effort and helps to reduce the size of the document without degrading the adequacy of the analysis or agency/public review (40 CFR 1502.21).

6.5 Content of an EA

A detailed outline for an ARNG EA is provided in the boxed text that follows. It is recommended that this format be used as a model in developing ARNG EAs. It is an interpretation, not a reinvention, of how Army and CEQ NEPA regulations are to be implemented. There might be situations where this format is not fully suited to addressing a particular ARNG action (e.g., where unique technical program, public involvement, or decision-making requirements exist), in which case some variation in format is appropriate.

Preparers should consult other sections of this handbook for detailed guidance on the application of NEPA to specific types of actions and on the treatment of certain "high-visibility" topics and resource areas. The information presented in this section is not intended to be all-inclusive. Ultimately, it is the proponent's responsibility to identify, analyze, and document all relevant issues and effects associated with the proposed action and alternatives.

Format and Content of an ARNG EA

Cover. The document cover should contain the name of the project, the month and year of the document (updated as each version is prepared), and the ARNG logo. It is helpful to use different colors for the covers of different versions of the EA (e.g., gray for preliminary draft, beige for draft, and green for final). The cover should be of a heavier paper stock than the text pages.

Inside of Cover. The inside of the document cover should provide an outline of the document's major sections; refer to Appendix Z for an example. This item is not required but is recommended for longer, more complex EAs as a quick reference to sections for the reader.

Signature Page. This is usually the first page of the document. It presents the title of the EA and lists the name, title, office, and signature (on final documents only) of key person who reviewed and approved the document. In some cases, it might also identify the proponent and document preparer separately. Examples of EA signature pages are provided in Appendix AA. As an alternative, the signature page may also provide other important information, including a list of cooperating agencies (if any), points of contact, and an abstract that describes the proposed action and alternatives and identifies the issues and resources analyzed in the document. An example of this alternative format is provided in Appendix AA.

Table of Contents. The Table of Contents for an EA should provide the section number and exact title of each document section, along with its corresponding page number. The List of Appendices, List of Tables, and List of Figures should be identified as separate sections in the Table of Contents. Anything in the document that precedes the Table of Contents should not be included.

Acronyms and Abbreviations. A list of the acronyms and abbreviations used throughout the EA should be provided.

Section 1.0: Purpose of and Need for the Proposed Action

1.1 Introduction. This section briefly identifies the proposed action, names the responsible agency(ies) involved, and presents a history of events leading up to the proposed action. It also identifies the regulations implementing NEPA under which the document has been prepared.

1.2 Purpose and Need. This section provides a clear statement that enables the reader to understand why the proposed acation is needed. Specific requirements for developing the purpose and need statement are discussed in Section 4.5 of this Handbook. It is also useful to include here, or as a separate section, a statement that identifies what decision is to be made regarding the proposal.

1.3 Scope of the Document. This section provides a brief overview of the actions, alternatives, and sites analyzed in the EA. It also identifies the resources that were evaluated.

Section 2.0: Description of the Proposed Action. This section provides a description of the proposed action. It should include such details as location considerations, numbers of personnel involved, and facility requirements. No program cost information should be included. Note that alternatives to the proposed action must be described in Section 3.0 of the EA (Alternatives Considered), not in this section. The information presented in this section of the EA drives the

identification of relevant issues and conditions arising from the activities that make up the proposed action, thus generating the effects that must be identified and evaluated. Information must be accurate, concise (to the point), comprehensive, and sufficiently detailed to permit a complete and objective analysis. For specific discussions on defining the proposed action, see Section 4.6.

Section 3.0: Alternatives Considered

3.1 Alternatives Development. This section describes how the alternative actions and/or alternative sites were identified, including the application of selection or screening criteria [21]; identifies the reasonable alternatives that were considered for further evaluation, including the "no action" alternative; and explains reasons for rejecting alternatives (if any) found to be unreasonable. Possible situations where an alternative might not be considered reasonable include, but are not limited to, the following: outside the scope; irrelevant to the decision; not supported by scientific evidence; limited in extent, duration, and intensity; not feasible; or not affordable. Further information on identifying and describing alternatives is provided in Section 4.7 of this handbook.

3.2 Alternatives to the Proposed Action. In this section, each alternative to the proposed action should be identified and described under separate subsection numbers (Sections 3.2.1, 3.2.2, 3.2.3, and so forth, depending on the number of alternatives to be analyzed).

In cases where the proposed action described in Section 2.0 itself represents a fully developed alternative (typically the preferred alternative), the type of information presented in Section 3.2 for each alternative action should be similar in detail. If the information describing the proposed action in Section 2.0 is to serve as a general foundation from which there are more than one alternative means for its implementation (e.g., alternative locations at which to construct and operate a new facility), the alternative descriptions presented here should build on that earlier information in providing more specific, unique details on how and where each alternative action would be implemented. For further information on this approach and on describing alternatives, see Sections 4.6 and 4.7.

3.3 No Action Alternative. This section describes the status quo or ongoing actions at a particular location(s). This alternative should be described in sufficient detail so that its scope is clear and its potential effects can be identified and compared to those of the other alternatives. Section 4.7 provides further information on interpreting this alternative.

Section 4.0: Affected Environment

The Affected Environment section of an EA contains a description of the current environmental conditions of the area(s) that would be affected if the proposed action (or alternative) was implemented. It represents the "as is" or "before the action" conditions (sometimes referred to as "baseline conditions") at the installation or other locations. Only environmental resources and resource parameters that could be affected by the action or are of public concern should be included in the Affected Environment description and analyzed under Environmental Consequences (Section 5.0 of this EA outline). In addition, the level of detail to be applied to

[21] The screening criteria for developing alternatives may include time constraints, specific training criteria, budget constraints, and others. Alternatives selected as a result of using screening criteria must be evaluated in detail.

each particular resource area should be commensurate with the level of importance of and concern for that resource and the issues it presents. If any resource was excluded from discussion altogether, an explanation for why it was excluded (e.g., it was not affected by the proposed action or alternatives, or it is covered by prior NEPA reviews) should be provided in the introduction to this section. See 40 CFR 1501.7(a)(3) for further discussion on this topic.

4.1 Location Description. The purpose of this section is to provide a general overview of the affected installation's (or other site's) environmental setting. The types of information that should be briefly described are as follows:

- Geographic setting of the affected area
- Ongoing mission(s) and primary activities on the installation or on other affected property
- General landscape of the area
- General climatic conditions

4.2 Land Use. The following landscape and land use conditions should be described, as appropriate:

- Land use/land cover within the installation or on other affected property
- Aesthetics and visual resources (overall character of the landscape, including any unique natural and man-made features; location of public lands, federally protected areas, and other visually sensitive areas; and local plans and policies regulating visual resources)
- Building function and general architecture
- Relevant location of local communities
- Land use management plans (e.g., local government comprehensive plans and state coastal zone management plans)
- Local zoning
- Property ownership, leasing, and other property agreements
- Local/regional development plans/programs that may contribute to cumulative effects
- Master Plans

4.3 Air Quality. The following air quality factors in the project area should be described, as appropriate:

- Ambient air quality conditions
- Existing air emission sources
- Air pollution source permits
- Federal and state air pollution control regulations and standards
- Criteria for attainment/nonattainment areas
- Sensitive receptors on and off the installation
- Compliance with Federal and State Implementation Plans
- Basis of air conformity analysis or Record of Non-Applicability (RONA)

- Local or regional meteorological conditions, as they relate to pollutant dispersion (e.g., wind speed, wind direction, and mixing height)

4.4 Noise. Information in this section should describe the following, as appropriate:

- Stationary noise sources (e.g., airfield operations, ordnance demolition, firing ranges, maintenance facilities, and construction)
- Mobile noise sources (e.g., vehicular traffic and aircraft)
- Sensitive receptors on and off the installation
- Noise monitoring results
- Federal, state, and local noise standards
- Land use compatibility
- Environmental Noise Management Plan

4.5 Geology and Soils. Information in this section should describe the following, as appropriate:

- Topographic conditions
- Geologic bedrock types and any unique concerns (e.g., subsidence)
- Seismic conditions and fault features
- Soil types and any unique concerns (e.g., potential for erosion)
- Prime and unique farmland
- Mining resources and mineral rights

4.6 Water Resources. This section should describe the following for surface water and groundwater conditions, as appropriate:

- Hydrology
- Quality
- Point and nonpoint sources of pollution
- Floodplain areas for 100- and 500-year floods
- Water resource districts and other water rights

4.7 Biological Resources. This section should include appropriate information on local fauna, flora, and habitats, including the following:

- Species commonly found on the installation or on other affected property
- Occurrence of sensitive species (federally or state listed threatened, endangered, or candidate species; and rare or unique species) on or in the vicinity of the installation or other affected property
- Aquatic and terrestrial ecosystem types (e.g., forests, wetlands, and fields) found on the installation, or on other affected property, and their regional importance (if any)
- Special habitat areas (e.g., areas used by nesting or overwintering species)
- Vegetation and wildlife management plans and practices (e.g., INRMP)

- Coordination with the appropriate state office for environmental resources and U.S. Fish and Wildlife Service

4.8 Cultural Resources. This section should provide a brief discussion of the area's prehistory and a summary of the status of the cultural resources inventory for the project area, including the following:

- Sites, buildings, and other structures of historical significance, including significant prehistoric sites and those from the Cold War era
- Resources eligible for listing on the National Register of Historic Places
- Archeological resources
- Paleontological resources
- Coordination with the State Historic Preservation Officer
- Programmatic agreements with the state
- Evidence of compliance with the DoD Annotated American Indian and Alaska Native Policy
- Integrated Cultural Resources Management Plan

4.9 Socioeconomics. To describe baseline sociological and economic conditions, the following elements should be discussed, as appropriate:

- Demographics
- Regional employment and economic activity
- Installation salaries and local expenditures
- Housing
- Schools
- Medical facilities
- Shops and services
- Recreation facilities
- Public and occupational health and safety
- Protection of children

4.10 Environmental Justice. Information in this section should describe the following for areas near the installation:

- Geographic distribution of minority populations
- Geographic distribution of low-income populations by poverty status
- Consumption patterns of populations that principally rely on fish and/or wildlife for subsistence

4.11 Infrastructure. This section describes both utilities and transportation elements associated with the affected location. Specific utilities that normally should be described, including both supply capacities and available capacities, are as follows:

- Potable water supply
- Wastewater treatment
- Solid waste disposal, including use of landfills and/or incinerators
- Energy sources, including electrical power, natural gas, fuel oil, coal, and/or steam generation
- Applicable transportation information that normally should be described includes the following:
- Roadways and traffic on and off the installation
- Rail access and service to the installation or other affected property
- Air operations at the installation, or on other affected property, and associated airspace use

4.12 Hazardous and Toxic Materials/Wastes. Information in this section should describe the following, as appropriate:

- Storage and handling areas
- Waste disposal methods and sites
- Installation Restoration Program
- Materials and wastes present, including asbestos, radon, lead paint, polychlorinated biphenyls (PCBs), and radioisotopes
- Ordnance use and disposal
- Aboveground and underground storage tanks
- Pollution prevention programs and plans

Section 5.0: Environmental Consequences

This section forms the scientific and analytic basis for the comparison of alternatives. It identifies the direct, indirect, and cumulative effects of the proposed action and alternatives (presented in Sections 2.0 and 3.0 of this EA outline) on each of the resource areas previously described in the Affected Environment section. Both beneficial and adverse effects are to be described. If no effects are identified for a particular resource area, that fact should be mentioned. When describing direct and indirect effects, it is not necessary to separate one from the other. Cumulative effects, however, are best broken out in a separate discussion covering all of the applicable resources, near the end of the Environmental Consequences section. Further guidance on identifying and describing potential effects is provided throughout Section 8 of this Handbook.

Along with describing the effects, measures planned to mitigate adverse effects (e.g., management of military vehicular traffic to prevent accelerated erosion, maintenance of abandoned facilities, and fencing around unexploded ordnance areas) and the likely results of their implementation should be discussed in the same section that describes the adverse effects. Agency consultation results that were instrumental in resolving impact and mitigation issues (e.g., in preserving endangered species habitat or historic sites) should be discussed and referenced. Further discussions on identifying mitigation measures and monitoring their effectiveness are presented in Appendix C of AR 200-2. In addition, any federal permits, licenses, and other

entitlements that would be necessary to implement the proposal should be identified where applicable.

The basic organization for most of Section 5.0 is presented in the following sample outline for land use and air quality resources. Each resource section from the Affected Environment (cultural resources, noise, water resources, etc.) should be numbered separately, and the resource sequence should correspond to the sequence used in the Affected Environment section of the EA. Under each resource, separate subsections are used to present effects discussions for the proposed action and each individual alternative, including the no action alternative, described in Sections 2.0 and 3.0 of this EA outline. When evaluating the no action alternative, it is important to remember that adverse effects sometimes do occur under this alternative.

5.1 Land Use

5.1.1 Effects of the Proposed Action

5.1.2 Effects of Alternative(s) to the Proposed Action[22]

5.1.3 Effects of the No Action Alternative

5.2 Air Quality

5.2.1 Effects of the Proposed Action

5.2.2 Effects of Alternative(s) to the Proposed Action

5.2.3 Effects of the No Action Alternative

5.3 through 5.12. For each of the remaining resources to be addressed, use the same format as above.

5.13 Mitigation Measures. This section should present and compare, in summary form, the mitigation plans for the preferred alternative and the reasonable alternatives evaluated in this section. Mitigation measures can include such actions as managing military vehicular traffic to prevent accelerated erosion, maintaining abandoned facilities, and installing fencing around unexploded ordnance areas. Further discussions on identifying mitigation measures and monitoring their effectiveness are presented in Appendix C of AR 200-2.

5.14 Cumulative Effects. This section discusses the relevant cumulative effects on those resources affected by the proposed action and alternatives. Refer to Sections 4.11.1 and 8.20 for further discussions on cumulative effects.

Section 6.0: Comparison of Alternatives and Conclusions

6.1 Comparison of the Environmental Consequences of the Alternatives. The purpose of this section is to compare and contrast the environmental effects of the alternatives. To help in

[22] When multiple alternatives are considered, each one should be analyzed and discussed in a separate subsection under each resource area.

this comparison, this section should contain a summary matrix that shows the overall effects for each of the alternatives. Two different example formats for matrices are presented in Appendix BB. If the first format shown in Appendix BB is used, the information should be as quantifiable as possible. If the second format is used, in which levels of effects are represented using qualifiers in the form of symbols, it is important that such qualifiers be carefully explained and interpreted on the matrix or in the text of this section. NGB-ARE strongly recommends the use of graphics to show comparisons among alternatives because the technique enhances the reader's comprehension of the material being presented.

6.2 Conclusions. The Conclusions section should provide a clear, substantive statement regarding the insignificance (or significance) of the effects identified for each of the alternatives analyzed in Section 5.0.

Section 7.0: References. The References section should provide bibliographical information for sources cited in the text of the EA. Draft documents should be cited only if the documents have attained relatively high review or approval within the issuing organization. Normally, only those references which are reasonably obtainable by the public are to be cited.

Section 8.0: Glossary. This section should provide a list of definitions for technical terms used in the EA. Inclusion of a glossary in ARNG EAs is optional.

Section 9.0: List of Preparers. The format for listing the preparers is explained in AR 200-2. The preparers selected should be diverse enough to ensure a multidisciplinary approach to the environmental and socioeconomic analysis.

Section 10.0: Agencies and Individuals Consulted. This section should list the names and agencies or organizations, if any, of individuals who were contacted for data and information used in support of the analysis and preparation of the EA, whether or not a response was received. Normally, only individuals external to the ARNG and NGB are listed here.

Appendices. Use appendices to support the content and conclusions contained in the main body of the EA, when necessary. Types of appendices usually included in an EA are as follows:

- Supporting technical data and methodological approaches (e.g., air emissions monitoring data, archeological survey results, and unique socioeconomic modeling applications)
- Official communications to and from outside agencies (e.g., U.S. Fish and Wildlife Service and State Historic Preservation Officer) that pertain to environmentally sensitive resources, cultural resources, and related issues. (See examples of ARNG coordination letters sent to outside agencies in Appendix K.)
- Public comments and responses (for use in the Final EA only; refer to Section 6.7 for guidance on this topic)
- Newspaper public notice affidavits (for use in the Final EA only; used to show proof of notices on availability of the Draft EA)

6.6 Alternative Formats for an EA

In addition to the standard EA format presented in Section 6.5 (referred to as Format 1), an alternative format is available for use in ARNG EAs. This second format (referred to as Format 2) combines the description of the affected environment and the analysis of environmental consequences into one section. Traditionally, these discussions have been separated into Sections 4.0 (Affected Environment) and 5.0 (Environmental Consequences), as under Format 1. Although these two particular sections are combined in Format 2, the overall content of the EA is the same.

Table 6-2 provides a sample outline for Section 4.0 using Format 2. This outline shows how the affected environment and environmental consequences for a given resource area are presented together, with the description of the existing conditions followed immediately by an analysis of potential effects. As discussed in Section 6.3, the contents of these two subject areas should not be mixed. Format 2 is particularly useful when applied to EAs that are exceptionally long or address multiple locations. ARNG proponents should consider the applicability of Format 2 when determining the best approach for organizing their EAs.

As discussed in Section 3.7, environmental management plans should be integrated with the NEPA process. Instead of completing the management plan and its NEPA analysis as separate documents, effective integration can be accomplished using a document format that combines the management plan and the NEPA document into a single report. An example of such a document format is presented in Appendix N for an INRMP EA. The resultant "planning assessment" includes a comprehensive description, analysis, and evaluation of all environmental components at a given location.

TABLE 6-2. SAMPLE OUTLINE USING FORMAT 2

4.0 Environmental Conditions and Consequences
4.1 Location Description
4.2 Land Use
    4.2.1 Affected Environment
    4.2.2 Environmental Consequences
        4.2.2.1 Effects of the Proposed Action
        4.2.2.2 Effects of Alternative(s) to the Proposed Action
        4.2.2.3 Effects of the No Action Alternative
4.3 Air Quality
    4.3.1 Affected Environment
    4.3.2 Environmental Consequences
        4.3.2.1 Effects of the Proposed Action
        4.3.2.2 Effects of Alternative(s) to the Proposed Action
        4.3.2.3 Effects of the No Action Alternative
4.4 Etc.

6.7 Responding to Comments

The proponent is required to make Draft EAs available locally for a 30-day (minimum) public comment period. Any requests for exceptions to this requirement should be directed to the NGB. Public comments, in the form of letters, faxes, and so forth, that are received must be presented in an appendix to the Final EA. Replies should make reference to the portions of the EA that address the issue, particularly if a change to the document has occurred as a result of the comment. A person who submitted a comment should be able to track the receipt and disposition of the comment. Other pertinent information provided by the public should also be incorporated into the final document, as appropriate. Responses to comments are to be recorded on an errata sheet and, in appropriate cases, changes made to the text of the EA.

As part of the NEPA process management plan discussed in Section 4.2, or as part of a separate public affairs plan if one is prepared early in the EA process, the development of procedures for handling comments received and for developing responses to the comments later on is recommended. When a large volume of comments are received, they should be logged into a database and a separate file created for master copies. Comments can then be easily screened for substantive points raised.

Some comment letters might identify a single issue; others might contain a long list of reviewers' concerns. As appropriate, individual points should be catalogued and cross-referenced so none are overlooked. If many comment letters and documents making the same points are received, it might be useful to consolidate duplicates and closely related comments to simplify the number of responses that must be developed. This approach helps to facilitate responding to a recurring comment once instead of repeating the response multiple times. A benefit of following this process is that it helps to ensure that responses given are consistent. It is also especially useful when responding to similar comments contained in "form letters."

Responses should be written openly, clearly, candidly, and with respect for the person commenting. All comments must receive a response. Substantive comments received are generally staffed with the proponent, the Environmental Program Manager, and the state Public Affairs Officer, as necessary, for the development of responses. (Refer to 40 CFR 1503.4 for further information on responding to public comments.)

6.8 Finding of No Significant Impact

The FNSI is a separate, brief document (usually no longer than two pages) that presents the reasons why the proposed action would not significantly affect the human environment. It documents the decision that an EIS is not required. A sample format for a FNSI is presented in Appendix H. The FNSI is to contain the following:

- Name of the action
- Brief description of the proposed action or preferred alternative, including any other alternatives considered[23]
- Brief discussion of likely environmental effects

[23] The preferred alternative selected in the FNSI can be the proponent's original proposed action, one of the alternative actions, or a mix of the alternatives analyzed in the EA.

- Reasoning behind the determination of no significant effects (including information on mitigation measures, if applicable; see also Section 6.9)
- Deadline and point of contact for receipt of comments or requests for further information

Under NGB policy, the public must be given at least 30 days to review and comment on the Final EA and FNSI before initiating the proposed action. Notification for the public review period is usually initiated by means of a display advertisement or legal notice published in at least one local newspaper of general circulation.

When the proposed action is one of national concern, is unprecedented, or normally requires an EIS, both the FNSI and Final EA must be made available for a minimum 30-day public review period prior to making a final decision, and public notification must include a news release to publicize the availability of the document. If the action is of national significance, HQDA must make a simultaneous announcement that includes publication in the *Federal Register.* Also, as previously discussed, AR 200-2 does allow the normal 30-day public review period to be reduced to a minimum of 15 days in cases where (1) waiting until the end of the 30-day period would jeopardize the project; (2) the additional comment period provides no public benefit; and (3) the proposed action is *not* one of national concern, is *not* unprecedented, and does *not* normally require an EIS. Reducing the 30-day period requires NGB approval. A sample request is presented in Appendix CC.

Unless comments received during the public review period convince the decision maker that further analysis and documentation are required, the proposed action may be initiated. If a FNSI cannot be supported by the analysis, the proponent may choose to modify or terminate the proposal or proceed to an EIS. If the proponent chooses to proceed to an EIS, the Environmental Program Manager should contact the NGB-ARE for further guidance.

6.9 Mitigated EA/FNSI

A "mitigated EA/FNSI" may be produced when, during preparation of an EA, preparers begin to suspect that the action might cause significant environmental effects. If preparers can show that the potential effects can be reduced to less-than-significant levels through the addition of appropriate mitigation measures, the EA/FNSI may be completed and no EIS need be prepared. Preparing a mitigated EA/FNSI typically requires less time and money than preparing an EIS. For a mitigated EA/FNSI to be considered legally adequate, however, the EA must show that a thorough analysis of environmental consequences was conducted, that the mitigation measures on which the EA/FNSI is based are specific and project-related, and that the measures will reduce the projected effects to less-than-significant levels. For a proponent to demonstrate convincingly that it is fully committed to implementing such mitigation measures with its proposal, the measures should be incorporated as part of the proposed action (or preferred alternative) description in the early sections of the EA. The measures should also be referred to or described in the accompanying FNSI. If the mitigation measures to which a proponent committed in an EA are eventually not funded, the results presented in the EA might no longer be valid. The proposal and the significance of its potential effects must then be reevaluated under NEPA. (Further discussion on mitigation measures and commitments to mitigation are provided in Section 8.21.)

Mitigated EAs/FNSIs are often challenged because of the perception that appropriate public participation is being avoided if an EIS is not prepared. Appropriate public participation in the review of the Draft EA can help to ensure that all relevant issues have been addressed and that potential effects have been thoroughly evaluated for significance.

If an agency cannot convincingly show in an EA that mitigation measures would reduce the effects to less-than-significant levels, the agency should prepare an EIS.

6.10 Administrative Record

The Administrative Record is a collection of all written information obtained during the preparation of the EA and documents the sources used to reach decisions. It includes, but is not limited to, written data, reports, communications (e.g., correspondence, records of telephone conversation), modeling results, maps, and illustrations. The Administrative Record should be compiled in conjunction with the EA and retained by the proponent and/or lead agency for a reasonable time following completion of the proposed action and all mitigation measures, which can take up to several years (e.g., multiyear training events and out-year construction projects). In most cases, the state ARNG maintains the Administrative Record. Further discussion on developing an Administrative Record is provided in Section 4.12.

7.0 ENVIRONMENTAL IMPACT STATEMENT PREPARATION AND CONTENT

7.1 Introduction

The preparation and content of an EIS, to a certain extent, are similar to those of an EA. As stated in Section 6.0, many of the same environmental resource areas and methodological approaches that apply to the analysis and documentation for an EIS also apply to EAs. Much of the guidance applicable to an EA is repeated here for the convenience of users preparing EISs. This section is intended to guide ARNG proponents and document preparers through the EIS process by establishing a greater level of consistency in the preparation of ARNG EISs. It provides the detailed information needed to develop this type of analysis and document.

The EIS format the ARNG uses is based on the CEQ's regulations and guidance contained in AR 200-2. The CEQ's regulations provide for a considerable degree of agency flexibility in the EIS analysis and documentation process. Although flexibility has allowed the ARNG to prepare or customize NEPA documents based on particular circumstances, over the years it has also resulted in the use of a variety of formats. ARNG participants in the NEPA process have indicated that a more structured, standardized format would greatly facilitate document preparation, training of new personnel, and, particularly, document review and approval.

7.2 EIS Versus EA

Although most ARNG proposed actions requiring detailed NEPA analysis result in the preparation of EAs, certain proposals require the ARNG to prepare an EIS. The EIS process is generally more formal and vigorous than that for an EA. The EIS process also entails more formal and extensive public participation. Table 7-1 lists major differences between EAs and EISs prepared by the ARNG.

7.3 Time Line for an EIS

Depending on the complexity of the proposed action, the time required to complete and process an EIS is sometimes 36 months or more. ARNG policy is for proponents to establish a schedule that will ensure that the analysis is completed in a timely, cost-effective manner and results in a document that is legally sufficient. A schedule for an approximate 36-month time frame is provided in Table 7-2 as an example of how the EIS process is organized. The milestone events indicated must occur regardless of the schedule. Several factors can cause a NEPA analysis schedule to change dramatically, including slippage in review times, additional review cycles, lack of available baseline data, and changes in elements of the DOPAA. Morever, completion of an EIS can be delayed in cases where initial analysis and documentation are inadequate, lack proper internal staffing, do not properly develop the proposed action or alternatives, or fail to identify interested stakeholders, or where coordination with other concerned federal agencies has not occurred.

Publication of the NOI (see Section 7.4) in the *Federal Register* initiates the public scoping period, which is typically 30 to 90 days in length. During the scoping period, a scoping meeting(s), to which agencies and the general public are invited to learn more about the ARNG's proposal and to express their views on the process and on issues to be addressed, should be held.

The Preliminary DEIS and Draft FEIS must be sent to HQDA for review and comment before their approval for release to the public. Approximately 30 to 40 days is needed for each of these HQDA reviews.

TABLE 7-1. MAJOR DIFFERENCES BETWEEN AN EA AND AN EIS

EA	EIS
Process usually begins independently without formal public notification.	Process officially begins with an NOI published in the *Federal Register*.
Public Affairs Plan is not required.	Public Affairs Plan is required.
Public scoping is not required.	Public scoping is required and typically includes holding a public scoping meeting(s).
Public notices are typically published only in local newspapers.	NOAs are published in the *Federal Register* in addition to public notices in local newspapers.
A 30-day (minimum) public comment period for Draft EAs is required; public meetings are not required.	A 45-day (minimum) public comment period for DEISs is required and typically includes a public meeting(s) or hearing(s).
Usually does not require HQDA review and approval.	Requires HQDA review and approval.
EAs are not required to be submitted to EPA.	Both DEISs and FEISs must be submitted to EPA for review and filing.
Generally less detailed, less complex, and, therefore, less time-consuming.	Generally more detailed, more complex, and more comprehensive; involves a more time-consuming process.
Process concludes with a 30-day (minimum) public review period for the Final EA/FNSI, or with the publication of an NOI.	Process concludes with a ROD following a 30-day (minimum) public review period for the FEIS.

The DEIS must be made available for no less than a 45-day public comment period, during which time at least one public meeting should be held. Close coordination between the state Public Affairs Officer and the NGB Public Affairs Environmental Office is required before setting up such meetings, and completion of the NGB's level 6 or 10 training course in risk communication is recommended for all meeting participants. The public comment period does not officially begin until EPA publishes its notice for the DEIS in the *Federal Register*.[24] Simultaneously, NGB publishes a detailed NOA on the DEIS and comment period in the *Federal Register.* The state ARNG, in coordination with the NGB, will publish similar notices in local newspapers. A sample NOA for an EIS is presented in Appendix J.

With the release of the FEIS, a 30-day (minimum) public review period is required before the ROD is signed and released to the public. Implementation of the action may begin immediately following signed approval of the ROD.

7.4 Notice of Intent

An NOI is prepared after the decision to prepare an EIS has been made and the proposed action and the alternatives to be considered have been reasonably well defined. The NOI is published in the *Federal Register* to formally announce the preparation of an EIS on a proposed action, and to

[24] Each week, EPA publishes a notice in the *Federal Register* that lists the EISs received during the preceding week.

TABLE 7-2. SAMPLE TIME LINE FOR AN EIS

Milestone	Calendar Days from Project Initiation
Complete project coordination with NGB/initiate project	0
Hold kickoff meeting	20
Complete public affairs plan	45
Complete draft description of proposed action and alternatives	75
Publish NOI in *Federal Register*/begin public scoping period	120
Hold public scoping meeting(s)	140
Complete initial coordination/consultation with appropriate outside agencies (federal, state, local, and tribal)	150
End public scoping period	180
Complete Internal DEIS/begin staffing within state ARNG and NGB	240
Complete staffing of Internal DEIS within state ARNG and NGB	285
Complete Preliminary DEIS/begin staffing within HQDA	330
Complete staffing/approval of Preliminary DEIS within HQDA	390
Conduct Congressional drop	420
Publish and distribute DEIS to EPA and public	430
Publish EPA notice and NOA for DEIS in *Federal Register*/begin public comment period	430
Hold public meeting(s)	460
End 45-day public comment period	495
Complete Internal FEIS/begin staffing within state ARNG and NGB	535
Complete staffing of Internal FEIS within state ARNG and NGB	580
Complete Draft FEIS/begin staffing within HQDA	580
Complete staffing/approval of Draft FEIS within HQDA	640
Conduct Congressional drop	670
Publish and distribute FEIS to EPA and public	710
Publish EPA notice and NOA for FEIS in *Federal Register*/begin public review period	710
End 30-day public review period	740
Sign ROD/initiate action/issue public notices	740

solicit comments from the public as part of scoping. The required contents of an NOI specified in the CEQ's regulations (40 CFR 1508.22) are as follows:

- A brief description of the proposed action and alternatives. The purpose and need statement should also be included.
- A brief description of the ARNG's scoping process, including the time, date, and location of any scoping meeting(s) planned, as well as an address to which comments may be mailed and/or sent electronically.
- The name and address of the point of contact within the ARNG or NGB who can address questions on the proposal and the EIS process. (It is recommended that a phone number for the point of contact also be included.)

The NOI should also include information on the availability of project-related documents or supporting information on the proposal that the public can view. Such documents can be placed

in a community library or other easily accessible government office, preferably one that is open beyond normal work hours.

Some readers of an NOI might not be familiar with the proposed action or the project location. It is therefore prudent to include sufficient background information in the NOI to help readers to understand what the proposal is about and why it is needed. Giving readers sufficient information minimizes confusion and helps to generate more meaningful comments. Depending on the extent of non-English-speaking persons in the affected community, making appropriate translations of the NOI available to the general public might also be prudent. A sample NOI is provided in Appendix I.

If for some reason work on an EIS stops or is postponed indefinitely, a cancellation notice must be published in the *Federal Register*. The cancellation notice refers to the original NOI and gives the rationale for ceasing work.

7.5 Document Development

To develop an EIS successfully, the proponent must have a basic understanding of the major components of the document. AR 200-2 states that an EIS should not exceed 150 pages in length (300 pages for very complex proposals), and must contain the following:

- Cover sheet.
- Summary.
- Table of contents.
- Purpose of and need for the action.
- Alternatives considered, including proposed action and no-action alternative.
- Affected environment (baseline conditions) that may be impacted.
- Environmental and socioeconomic consequences.
- List of preparers.
- Distribution list.
- Index.
- Appendices (as appropriate).

The basic components of an example ARNG EIS are outlined in Section 7.7.

The EIS should be well focused in each of its major components or sections. Writing style should be such that the document attains clarity, brevity, and legal sufficiency. ARNG preparers should adhere to the following guidelines:

- Develop and follow an outline.
- Write clearly, concisely, and accurately.
- Provide only relevant information.
- Be consistent across all sections of the document.

Preparers should be careful not to mix discussions of different subject areas inadvertently, unnecessarily increasing the length of the document and obscuring the line of thought for the

analysis. Each section should be "pure" in its presentation of the subject matter. For instance, the section describing the proposed action should not include a discussion of alternatives to the proposed action. Similarly, the section describing the affected environment should focus only on baseline data (existing conditions) and should not include statements regarding potential impacts or findings. The Environmental Consequences section should analyze potential effects and should not include any supporting baseline data, which are reserved for the description of the affected environment. These "crossovers" of technical sections within an EIS are confusing to reviewers and decision makers and can require time-consuming, costly revisions.

EISs should be presented as clearly and concisely as possible. When appropriate, existing documentation describing all or portions of the affected environment or other information applicable to describing the analysis results (e.g., technical research papers) can be incorporated by reference to help to cut down on the bulk of the EIS (see also 40 CFR 1502.21). Because the audience is often not technically versed in all subject areas, the documents should be written in plain language. In addition, appropriate figures and graphics that support the text and can be easily interpreted by the public should be provided. Appendices should be included to support the main components of the EIS, as appropriate. Whenever possible, technical editors should review the document to ensure accuracy, consistency, and readability.

ARNG policy requires that EISs be prepared on recycled paper. The recycled paper symbol should be presented on the inside of the document cover. In terms of document length, the text of an FEIS should not exceed 150 pages, although proposals of unusual scope or complexity might require up to 300 pages (40 CFR 1502.7). Both DEISs and FEISs should be printed double-sided to conserve paper.

7.6 Procedures for Supplemental EISs

Procedures for preparing, circulating, and filing a Supplemental EIS (refer to Section 1.6.5 for information on the application of supplemental documents) are the same as those required for the original document, with the exception that scoping for an EIS might not need to be repeated (40 CFR 1502.9[c][4]). Also, when preparing a supplemental EIS, it is important to use those portions of the original document (through direct incorporation or incorporation by reference, rather than attaching the original document) that are still applicable and have not changed significantly. The preparer of the supplemental EIS can then focus any new data collection, analysis, and documentation efforts on the proposed actions, resources, and resource issues that have changed. Maximizing use of existing information simplifies the overall EIS effort and helps to reduce the size of the document without degrading the adequacy of the analysis or agency/public review.

7.7 Content of an EIS

A detailed outline for an ARNG EIS is provided in the following boxed text. It is recommended that this format be used as a *model* in developing ARNG EISs. It is an interpretation, not a reinvention, of how Army and CEQ NEPA regulations are to be implemented. This format includes a slight enhancement of the regulations in that it uses separate sections to describe the proposed action and the alternatives rather than combining the two. This separation allows for more focus in describing the proposed action, thereby providing sufficient detail to ensure understanding and make the description more useful to both preparers and reviewers of the document. There might be situations where this format is not fully suited to addressing a particular ARNG action (e.g., where unique technical program, public involvement, or decision-making requirements exist), in which case some variation in format is appropriate.

For most sections of an EIS, the content is generally the same as that in an EA (see Section 6.5). The major difference between the two documents is that an EIS is more comprehensive and contains a greater level of detail than is provided by an EA. In addition, the ARNG does not use Format 2 for EISs (see Section 6.6). Preparers should consult other sections of this handbook for detailed guidance on the application of NEPA to specific types of actions and on the treatment of certain "high-visibility" topics and resource areas. The information presented in this section is not intended to be all-inclusive. Ultimately, it is the proponent's responsibility to identify, analyze, and document all relevant issues and effects associated with the proposed action and alternatives.

Format and Content of an ARNG EIS

Cover. The document cover should contain the name of the project, the month and year of the document (updated as each version is prepared), and the ARNG logo. It is helpful to use different colors for the covers of different versions of the EIS (e.g., gray for preliminary draft, beige for draft, and green for final). The cover should be of a heavier paper stock than the text pages.

Inside of Cover. The inside of the document cover should provide an outline of the document's major sections; refer to Appendix DD for an example. This item is not required but is recommended as a quick reference to sections for the reader.

Signature Page. This is usually the first page of the document. It presents the title of the EIS and lists the name, title, office, and signature (on final documents only) of each key person responsible for reviewing and approving the document; it may also identify the proponent and document preparer separately. It also provides other important information, including a list of cooperating agencies (if any), points of contact, and an abstract that describes the proposed action and alternatives and identifies the issues and resources analyzed in the document. It is also useful to provide information on the availability of the document and any formal comment or review periods (see 40 CFR 1502.11). A sample EIS signature page is provided as Appendix EE.

Summary. The Summary should highlight the major conclusions of the environmental analysis and identify unresolved or controversial issues. The Summary should outline any mitigation measures required to initiate the action. New data should not be mentioned in the Summary; only data and key findings covered in the EIS should be summarized. The Summary should be succinct (usually no more than 15 pages in length) and typically contains the following sections:

- *Introduction.* A brief overview of the proposed action, the locations proposed for the action, a history of events leading up to the proposed action, and the general scope of the EIS is provided.
- *Purpose and Need.* The purpose of and need for the proposed action are described.
- *Proposed Action.* Key components of the proposed action are highlighted, including both construction and operational phases, if applicable.
- *Alternatives.* Each of the alternatives analyzed is briefly described. In addition, the preferred alternative (if any) should be presented with a brief description of why that course of action is preferred.
- *Environmental Consequences.* A summary of the key findings of the environmental analysis presented in the EIS, including any controversial issues, is provided. The main effects of each alternative analyzed should be described (e.g., effects on socioeconomics, air quality, infrastructure, etc.). This section should also compare and contrast the effects of the various alternatives. To help in this comparison, it should contain a summary matrix that compares the overall effects for each of the alternatives. Two different example formats of matrices are presented in Appendix BB. When the first format is used, the information should be as quantifiable as possible. If the second matrix, in which impact levels are represented using qualifiers in the form of symbols, is used, it is very important that such qualifiers be carefully explained and interpreted on the matrix or in the text of this section.

The pages of the Summary should be numbered S-1, S-2, and so forth. Depending on the overall

length of the EIS, the Summary may be published as a separate document for distribution to reviewers who do not require the entire EIS. When bound separately, it should have a formal cover, similar to that of the EIS, and should also include a copy of the signature page.

Table of Contents. The Table of Contents for an EIS should provide the section number and title of each document section, along with its corresponding page number. The List of Appendices, List of Tables, and List of Figures should be identified as separate sections in the Table of Contents. Anything in the document that precedes the Table of Contents (e.g., Summary) should not be included.

Section 1.0: Purpose of and Need for the Proposed Action

1.1 Introduction. This section briefly identifies the proposed action and the responsible agency(ies) involved, and provides a history of events leading up to the proposed action. It also identifies the regulations implementing NEPA under which the document has been prepared.

1.2 Purpose and Need. This section provides a clear statement that enables the reader to understand why the specific proposal is needed. Specific requirements in developing the purpose and need statement are discussed in Section 4.5. It is also useful to include here, or as a separate section, a statement that identifies what decision(s) is to be made regarding the proposal.

1.3 Scope of the Document. This section provides a brief overview of the actions, alternatives, and sites analyzed in the EIS, along with identifying the resources evaluated.

1.4 Public Participation. For the DEIS, this section should identify the public involvement activities that have occurred (scoping period, meetings, newsletters, and so forth) and are planned (e.g., review and comment on the DEIS, followed by release of the FEIS). It should also summarize the key issues identified during scoping. For the FEIS, a summary of all of the public involvement that has occurred should be included. In addition, this section briefly summarizes the issues identified from comments received on the DEIS.

1.5 Related National Environmental Policy Act Reviews. This section should identify any existing or in-process NEPA documents related to the proposal or location analyzed in the EIS and should briefly summarize how they are related to the proposed action.

Section 2.0: Description of the Proposed Action.

This section provides a description of the proposed action. It should include such details as location considerations, numbers of personnel involved, and facility requirements. No program cost information should be included. Note that alternatives to the proposed action must be described in Section 3.0 of the EIS (Alternatives Considered), not in this section.

The information presented in this section of the EIS drives the identification of relevant issues and conditions arising from the activities that make up the proposed action, thus generating the effects that must be identified and evaluated. Information must be accurate, concise, comprehensive, and sufficiently detailed to permit a complete and objective analysis. For specific discussions on defining the proposed action, see Section 4.6.

Section 3.0: Alternatives Considered

3.1 Alternatives to the Proposed Action. This section describes how the alternative actions and/or alternative sites were identified, including the application of selection or screening criteria,[25] and lists the reasonable alternatives that were considered for further evaluation, including the "no action" alternative. In this section, each alternative to the proposed action, including the preferred alternative (if known), should be identified and described under separate subsection numbers (Sections 3.1.1, 3.1.2, 3.1.3, and so forth, depending on the number of alternatives to be analyzed). The preferred alternative must be identified in the FEIS unless another law prohibits the expression of such a preference (40 CFR 1502.14(e)).

In cases where the proposed action described in Section 2.0 itself represents a fully developed alternative (typically the preferred alternative), the type of information presented in Section 3.1 for each alternative action should be similar in detail. If the information describing the proposed action in Section 2.0 is to serve as a general foundation from which there are more than one alternative means for its implementation (e.g., alternative locations at which to construct and operate a new facility), the alternative descriptions presented here should build on that earlier information in providing more specific, unique details on how and where each alternative action would be implemented. For further information on this approach and on describing alternatives, see Sections 4.6 and 4.7.

3.2 No Action Alternative. This section describes the status quo or ongoing actions at a particular location(s). This alternative should be described in sufficient detail so that its scope is clear and its potential effects can be identified and compared to those of the other alternatives.

3.3 Alternatives Eliminated From Further Consideration. This section provides a brief description of alternatives that were eliminated from further analysis (if any) and explains why they were found to be unreasonable. To help explain this decision, a summary table comparing all the alternatives against each of the selection criteria should be included, particularly when a number of criteria were applied. Possible situations where an alternative might not be considered reasonable include, but are not limited to, the following: outside the scope; irrelevant to the decision; not supported by scientific evidence; limited in extent, duration, and intensity; not feasible; or not affordable.

Section 4.0: Affected Environment.

The Affected Environment section of an EIS contains a description of the current environmental conditions of the area(s) that would be affected if the proposed action (or alternative) was implemented. It represents the "as is" or "before the action" conditions (sometimes referred to as "baseline conditions") at the installation or other locations. Only those environmental resources and resource parameters that could be affected by the action or are of public concern should be included in the Affected Environment description and analyzed under Environmental Consequences (Section 5.0 of this EIS outline). In addition, the level of detail to be applied to each particular resource area should be commensurate with the level of importance of and concern for that resource and the issues it presents. If a particular resource was excluded from

[25] The screening criteria for developing alternatives may include time constraints, specific training criteria, budget constraints, and others. Alternatives selected as a result of using screening criteria must be evaluated in detail.

discussion altogether, an explanation for why it was excluded (e.g., it was not affected by the proposed action or alternatives or it is covered by prior NEPA reviews) should be provided in the introduction to this section. (See 40 CFR 1501.7(a)(3) for further discussion on this topic.)

4.1 Location Description. The purpose of this section is to provide a general overview of the affected installation's (or other site's) environmental setting. The types of information that should be briefly described are as follows:

- Geographic setting of the affected area
- Ongoing mission(s) and primary activities on the installation or on other affected property
- General landscape of the area
- General climatic conditions

4.2 Land Use. The following landscape and land use conditions should be described, as appropriate:

- Land use/land cover within the installation or on other affected property
- Aesthetics and visual resources (overall character of the landscape, including any unique natural and man-made features; location of public lands, federally protected areas, and other visually sensitive areas; and local plans and policies regulating visual resources)
- Building function and general architecture
- Relevant location of local communities
- Land use management plans (e.g., local government comprehensive plans and state coastal zone management plans)
- Local zoning
- Property ownership, leasing, and other property agreements
- Local/regional development plans/programs that may contribute to cumulative effects
- Master Plan

4.3 Air Quality. The following air quality factors in the project area should be described, as appropriate:

- Ambient air quality conditions
- Existing air emission sources
- Air pollution source permits
- Federal and state air pollution control regulations and standards
- Criteria for attainment/nonattainment areas
- Sensitive receptors on and off the installation
- Compliance with Federal and State Implementation Plans
- Basis of air conformity analysis Record of Non-Applicability (RONA)

- Local or regional meteorological conditions, as they relate to pollutant dispersion (e.g., wind speed, wind direction, and mixing height)

4.4 Noise. Information in this section should describe the following, as appropriate:

- Stationary noise sources (e.g., airfield operations, ordnance demolition, firing ranges, maintenance facilities, and construction)
- Mobile noise sources (e.g., vehicular traffic and aircraft)
- Sensitive receptors on and off the installation
- Noise monitoring results
- Federal, state, and local noise standards
- Land use compatibility
- Environmental Noise Management Plan

4.5 Geology and Soils. Information in this section should describe the following, as appropriate:

- Topographic conditions
- Geologic bedrock types and any unique concerns (e.g., subsidence)
- Seismic conditions and fault features
- Soil types and any unique concerns (e.g., potential for erosion)
- Prime and unique farmland
- Mining resources and mineral rights

4.6 Water Resources. This section should describe the following for surface water and groundwater conditions, as appropriate:

- Hydrology
- Quality
- Point and nonpoint sources of pollution
- Floodplain areas for 100- and 500-year floods
- Water resource districts and other water rights

4.7 Biological Resources. This section should include appropriate information on local fauna, flora, and habitats, including the following:

- Species commonly found on the installation or on other affected property
- Occurrence of sensitive species (federally or state listed threatened, endangered, or candidate species; and rare or unique species) on or in the vicinity of the installation or other affected property
- Aquatic and terrestrial ecosystem types (e.g., forests, wetlands, and fields) found on the installation, or on other affected property, and their regional importance (if any)
- Special habitat areas (e.g., used by nesting or overwintering species)
- Vegetation and wildlife management plans and practices (e.g., INRMP)

- Coordination with the appropriate state office for environmental resources and U.S. Fish and Wildlife Service.

4.8 Cultural Resources. This section should provide a brief discussion of the area's prehistory and a summary of the status of the cultural resources inventory for the project area, including the following:

- Sites, buildings, and other structures of historic significance, including prehistoric sites and those from the Cold War era
- Resources eligible for listing on the National Register of Historic Places
- Archeological resources
- Paleontological resources
- Coordination with the State Historic Preservation Officer
- Programmatic agreements with the state
- Evidence of compliance with the DoD Annotated Policy Document for DoD American Indian and Alaska Native Policy
- Integrated Cultural Resources Management Plan

4.9 Socioeconomics. To describe baseline sociological and economic conditions, the following elements should be discussed, as appropriate:

- Demographics
- Regional employment and economic activity
- Installation salaries and local expenditures
- Housing
- Schools
- Medical facilities
- Shops and services
- Recreation facilities
- Public and occupational health and safety
- Protection of children

4.10 Environmental Justice. Information in this section should describe the following for areas near the installation:

- Geographic distribution of minority populations
- Geographic distribution of low-income populations by poverty status
- Consumption patterns of populations that principally rely on fish and/or wildlife for subsistence

4.11 Infrastructure. This section describes both utilities and transportation elements associated with the affected location. Specific utilities that normally should be described, including both supply capacities and available capacities, are as follows:

- Potable water supply
- Wastewater treatment
- Solid waste disposal, including use of landfills and/or incinerators
- Energy sources, including electrical power, natural gas, fuel oil, coal, and/or steam generation

Applicable transportation information that normally should be described includes the following:

- Roadways and traffic on and off the installation
- Rail access and service to the installation or other affected property
- Air operations at the installation, or on other affected property, and associated airspace use

4.12 Hazardous and Toxic Materials/Wastes. Information in this section should describe the following, as appropriate:

- Storage and handling areas
- Waste disposal methods and sites
- Installation Restoration Program
- Materials and wastes present, including asbestos, radon, lead paint, polychlorinated biphenyls (PCBs), and radioisotopes
- Ordnance use and disposal
- Aboveground and underground storage tanks
- Pollution prevention programs and plans

Section 5.0: Environmental Consequences

This section forms the scientific and analytic basis for the comparison of alternatives. It identifies the direct, indirect, and cumulative effects of the proposed action and alternatives (presented in Sections 2.0 and 3.0 of this EIS outline) on each of the resource areas previously described in the Affected Environment section. Both beneficial and adverse effects are to be described. If no effects are identified for a particular resource area, that fact should be mentioned. When describing direct and indirect effects, it is not necessary to separate one from the other. Cumulative effects, however, are best broken out in a separate discussion covering all of the applicable resources, near the end of the Environmental Consequences section.

Along with describing the beneficial and adverse effects, measures proposed to mitigate adverse effects (e.g., management of military vehicular traffic to prevent accelerated erosion, maintenance of abandoned facilities, and fencing around unexploded ordnance areas) and the likely results of their implementation should be discussed (40 CFR 1502.16(h)) in the same section that describes the adverse effects. Agency consultation results that were instrumental in resolving impact and mitigation issues (e.g., in preserving endangered species habitat or historic sites) should be discussed and referenced. Regarding energy resources and other natural and depletable resources, discussions on any conservation measures to be applied to the proposal should be included (40 CFR 1502.16(e) and (f)). In addition, any federal permits, licenses, and other entitlements that would be necessary to implement the proposal must be identified where applicable (40 CFR

1502.25(b)). If there is uncertainty on whether a federal permit, license, or other entitlement is necessary, the EIS should so indicate.

The basic organization for most of Section 5.0 is presented in the following sample outline for land use and air quality resources. Each resource section from the Affected Environment section (cultural resources, noise, water resources, and so forth) should be numbered separately, and the resource sequence should correspond to the sequence used in the Affected Environment section. Under each resource, separate subsections should be used to present impact discussions for the proposed action and each individual alternative, including the no action alternative, described in Sections 2.0 and 3.0 of this EIS outline. When evaluating the no action alternative, it is important to remember that impacts can and sometimes do occur under this alternative.

5.1 Land Use

5.1.1 Effects of the Proposed Action

5.1.2 Effects of Alternative(s) to the Proposed Action

5.1.3 Effects of the No Action Alternative

5.2 Air Quality

5.2.1 Effects of the Proposed Action

5.2.2 Effects of Alternative(s) to the Proposed Action

5.2.3 Effects of the No Action Alternative

5.3 through 5.12. For each of the remaining resources to be addressed, use the same format as above.

5.13 Cumulative Effects. This section discusses the relevant cumulative effects on those resources affected by the proposed action and alternatives. Refer to Sections 4.11.1 and 8.20 for further discussions on cumulative effects.

5.14 Comparison of the Environmental Consequences of the Alternatives. This section compares and contrasts the effects of the various alternatives analyzed. To help in this comparison, this section should contain a summary matrix that compares the overall effects for all of the alternatives. Two different example formats of matrices are presented in Appendix BB. When the first format is used, the information should be as quantifiable as possible. If the second format, in which impact levels are represented using qualifiers in the form of symbols, is used, it is important that such qualifiers be carefully explained and interpreted on the matrix or in the text of this section.

5.15 Unavoidable Adverse Effects. For the resources analyzed, this section briefly summarizes the adverse or significant effects (if any) expected to occur with implementation of the proposal (40 CFR 1502.16). Refer to Section 4.11.2 for a discussion of significance of effects.

5.16 Relationship Between Short-Term Uses of Man's Environment and the Maintenance and Enhancement of Long-Term Productivity. The purpose of this section is to identify what

might be gained or lost over the long term because of short-term uses of land and other resources (40 CFR 1502.16). For example, the demolition and immediate replacement of an older building that has poor insulation and is contaminated with asbestos-containing materials and lead paint would, in the short term, cause added air emissions and noise, potential soil erosion, and the temporary displacement of personnel. In the long term, however, operation of the new building would result in improved facility utilization, lower heating and cooling requirements (and thus reduced air emissions from the installation's power plant), and a reduction in potential human health effects. Conversely, vegetation removal and surface grading for a new firing range could, in the long term, result in the permanent loss of sensitive species local to that area.

5.17 Irreversible and Irretrievable Commitment of Resources. This section of the EIS identifies those effects where there would be a permanent loss of resources (e.g., burning of fossil fuels) and where resources would be indefinitely foregone (that is, the resources would remain but would be inaccessible or could not be used, such as when timber productivity within a proposed right-of-way is lost to road construction) (40 CFR 1502.16).

Section 6.0: References. The References section should provide bibliographic information for sources cited in the text of the EIS. Draft documents should be cited only if the documents have attained relatively high review or approval within the issuing organization. Normally, only those references which are reasonably obtainable by the public should be included.

Section 7.0: Index. The index should provide the location, by section and page number, of terms frequently used in the EIS. The index must reflect the final pagination of the printed EIS.

Section 8.0: Glossary. This section provides a list of definitions for technical terms used in the EIS.

Section 9.0: List of Preparers. The format for listing preparers of the EIS is explained in Appendix E to AR 200-2. The preparers selected should be diverse enough to ensure a multidisciplinary approach to the environmental and socioeconomic analysis.

Section 10.0: Agencies and Individuals Consulted. This section should list the names and agencies or organizations (if any) of individuals who were contacted for data and information used in support of the analysis and preparation of the EIS, regardless of whether a response was received. Normally, only individuals external to the ARNG, NGB, and HQDA are listed here.

Section 11.0: Distribution List. This section should include the name, organization (if any), and address of each person who is to receive a copy of the DEIS or FEIS. For the DEIS, a distribution list can be developed based on agencies, officials, and special interest groups that typically receive NEPA documents relative to their geographic area or particular interests, as well as requests obtained during the scoping process. The Environmental Program Manager, the state Public Affairs Officer, and NGB should be able to assist the proponent in developing this list. The FEIS list typically consists of the same agencies, officials, and special interest groups that received the DEIS, along with the individuals who commented on the DEIS and/or requested a copy of the FEIS.

Appendices. Use appendices to support the content and conclusions contained in the main body of the EIS, when necessary. Types of appendices usually included in an EIS are:

- Supporting technical data and methodological approaches (e.g., air emissions monitoring data, archeological survey results, and unique socioeconomic modeling applications)
- Official communications to and from outside agencies (e.g., U.S. Fish and Wildlife Service and State Historic Preservation Office) that pertain to environmentally sensitive resources and related issues. Examples of ARNG coordination letters sent to outside agencies are provided in Appendix K.
- Public comments and responses. Note that if this appendix becomes too large, it may be made a separate volume of the FEIS.

Acronyms and Abbreviations. A list of the acronyms and abbreviations used throughout the EIS should be provided. For the readers' convenience, it should be included as an 11- by 17-inch foldout page at the back of the document. In cases where the EIS is reasonably short, an alternative would be to place this section immediately after the Table of Contents using standard letter-size paper.

7.8 Responding to Comments

DEISs must be made available for a 45-day (minimum) public comment period. Public comments received, in the form of letters, faxes, and so forth, must be presented in an appendix to the FEIS, along with responses to those comments. Replies should make reference to those portions of the EIS that address the issue, particularly if the document has been changed as a result of the comment. A person who submitted a comment should be able to track the receipt and disposition of the comment. Other pertinent information provided by the public should also be incorporated into the final document, as appropriate.

It is recommended that the development of procedures for handling comments received and for developing responses to the comments be made a part of the NEPA process management plan or described within a separate public affairs plan (see Section 4.2). When a large volume of comments are received, they should be logged into a database and a separate file created for master copies. Comments can then be easily screened for substantive points raised.

Some comment letters might identify a single issue; others might contain a long list of reviewers' concerns. As appropriate, individual points should be catalogued and cross-referenced so none are overlooked. If many comment letters and documents making the same points are received, it might be useful to consolidate duplicates and closely related comments to simplify the number of responses that must be developed. This helps to facilitate responding to a recurring comment once instead of repeating the response multiple times. A benefit of following this process is that it helps to ensure that responses given are consistent. It is also especially useful when responding to similar comments contained in "form letters."

Responses should be written openly, clearly, candidly, and with respect for the commentor. All comments must receive a response. Substantive comments received are generally staffed with the proponent, the Environmental Program Manager, the state Public Affairs Officer, and the NGB, as necessary, for the development of responses.

7.9 Review of EISs by the U.S. Environmental Protection Agency

As described in Section 2.3.1, all DEISs and FEISs must be filed with EPA. Under Section 309 of the Clean Air Act (42 U.S.C. 7609), EPA is responsible for reviewing and commenting on EISs, and for notifying proponents and lead agencies of any deficiencies.

The intent of Section 309 is to give EPA an independent agency review role otherwise absent under NEPA, and to ensure that federal agencies preparing documentation under NEPA have the benefit of a review by a federal agency whose primary mission is the protection of the environment. It also directs EPA to comment in writing and to make its comments available for public review.

Section 309 further directs the EPA Administrator to refer "any such legislation, action, or regulation" to CEQ if it is found to be "unsatisfactory from the standpoint of public health or welfare or environmental quality…." It also provides authority for EPA to independently determine that an action proposed by a federal agency is a major federal action that would significantly affect the environment even if the proponent or lead agency has determined otherwise.

EPA's review is primarily concerned with identifying and recommending mitigative measures for the significant environmental effects associated with the proposal. The "adequacy" of the

information and analysis contained in the documentation is reviewed as needed to support this objective. The adequacy of a document is based on a wide variety of issues, including impact predictions, mitigation measures to be applied, the selection of alternatives analyzed, and consistency with environmental protection processes.

It is EPA's policy to review and comment in writing on all DEISs officially filed with the agency, to provide a rating of the DEIS, and to meet with the proponent and/or lead agency to resolve significant issues.

The purpose of the rating system for DEISs is to summarize the level of EPA's overall concern with the proposal and to define the associated follow-up that will be conducted with the proponent and/or lead agency. It is an alphanumeric system that rates both the environmental acceptability of the proposed action and the adequacy of the NEPA document. In general, the rating is based on the preferred alternative, if identified; otherwise, individual alternatives are rated. EPA's categories for rating the environmental impact of the action are as follows:

- **LO (Lack of Objections).** The review has not identified any potential environmental impacts requiring substantive changes to the proposal.
- **EC (Environmental Concerns).** The review has identified environmental impacts that should be avoided to fully protect the environment. Corrective measures may require changes to the proposal or application of mitigation measures.
- **EO (Environmental Objections).** The review has identified significant environmental impacts that should be avoided to adequately protect the environment. Corrective measures may require substantial changes to the proposal or consideration of some other project alternative.
- **EU (Environmentally Unsatisfactory).** The review has identified adverse environmental impacts that are of sufficient magnitude that EPA believes the action must not proceed as proposed.

EPA's categories for rating the adequacy of DEISs are as follows:

- **"1" (Adequate).** The DEIS adequately sets forth the environmental impact(s) of the preferred alternative, if identified, and those of the alternatives reasonably available to the project or action.
- **"2" (Insufficient Information).** The DEIS does not contain sufficient information to fully assess environmental impacts that should be avoided to fully protect the environment; or the EPA reviewer has identified new, reasonably available alternatives within the spectrum of alternatives analyzed in the DEIS that could reduce the environmental impacts of the proposal. The identified additional information, data, analyses, or discussion should be included in the FEIS.
- **"3" (Inadequate).** The DEIS does not adequately assess the potentially significant environmental impacts of the proposal; or the EPA reviewer has identified new, reasonably available alternatives outside the spectrum of alternatives analyzed in the DEIS that should be analyzed to reduce the potentially significant environmental impacts. The identified additional information, data, analyses, or discussions are of such a magnitude that they should have full public review in a supplemental or revised DEIS.

EPA's rating of a DEIS will consist of one of the category combinations shown in Table 7-3, which also indicates the level of follow-up that EPA should take based on the level of concern

TABLE 7-3. EPA RATING CATEGORIES AND FOLLOW-UP REQUIREMENTS

Rating Categories	Follow-Up on DEIS Comment Letter
LO	None
EC-1, EC-2	Phone Call with Proponent/Lead Agency
EO-1, EO-2	Meeting with Proponent/Lead Agency
EO-3, EU-1, EU-2, EU-3	Meeting with Proponent/Lead Agency

identified in its comment letter. When a follow-up phone call or meeting with EPA is required, its purpose is (1) to describe the specific EPA concerns and discuss ways to resolve them, (2) to ensure that the EPA review has correctly interpreted the proposal and supporting information, and (3) to discuss any ongoing proponent/lead agency actions that might resolve the EPA concerns. EPA's comment letter itself and the assigned rating are not subject to negotiation and will not be changed on the basis of the phone call or meeting unless errors in EPA's understanding of the issues are discovered.

7.10 Record of Decision

The ROD is the final step in the EIS process. It is a concise public document that identifies the alternatives considered by the ARNG in reaching its decision. It summarizes the major issues and considerations, documents the decision, and identifies necessary steps (mitigation measures) to lessen the effects on the environment. No sooner than 30 days following publication of the NOA for the FEIS in the *Federal Register*, final approval and signature of the ROD may occur. The ROD is then made available to the public through appropriate public notice, such as publication of the ROD, or NOA of the ROD, in the *Federal Register* and in local newspapers, and direct mailings of the ROD to interested parties (see CEQ *Forty Most Asked Questions*, Number 34a, in Appendix C in this handbook. Implementation of the preferred action may begin immediately following approval signature of the ROD. Section 9.2.8 provides guidance on processing a ROD.

The ROD will contain the following:

- A statement of the decision.
- Identification of all alternatives considered, specifying the "preferred" alternative(s) as well as the "environmentally preferred" alternative(s). (See CEQ *Forty Most Asked Questions*, Number 6, in Appendix C of this handbook for further discussions on this topic.)
- Discussion of all factors, including any environmental, economic, and technical factors, that the ARNG considered in making a decision.
- Rationale for choosing the preferred alternative.
- A description of mitigation measures to be implemented, a summary of any monitoring and enforcement program to be adopted, and an explanation of why certain mitigation measures were not adopted (if any) when such mitigation measures would have avoided or minimized environmental harm.[26]

[26] If the proponent commits to mitigative measures in the ROD, they must be implemented. If the proponent fails to commit resources to ensure mitigation is accomplished, the description of expected impacts is inaccurate and the decision to

It is important to note that the preferred alternative selected in the ROD may be the proponent's original proposed action, one of the alternative actions, or a mix of the alternatives analyzed in the EIS. Public comment on the ROD is not required; however, it is the NGB's policy to receive and respond to public concerns regarding ARNG actions. (See Section II(6)(m)(2) of the *Public Affairs Guidance on National Guard Bureau Environmental Programs,* presented as Appendix U in this handbook.) A sample ROD is presented in Appendix FF.

7.11 Administrative Record

The Administrative Record is the collection of all written information obtained during the preparation of the EIS, and it documents the sources used to reach decisions. It includes, but is not limited to, written data, reports, communications (e.g., correspondence, records of telephone conversations, and the like), modeling results, maps, and illustrations. The Administrative Record should be compiled in conjunction with the EIS and retained by the proponent and/or lead agency for a reasonable time following completion of the proposed action and all mitigation measures, which can take up to several years (e.g., multiyear training events and out-year construction projects). In most cases, the state ARNG maintains the Administrative Record. Further discussion on developing an Administrative Record is provided in Section 4.12.

proceed with the project was made without adequate information. For further discussion of mitigation commitments, see Section 8.21 of this handbook.

8.0 RESOURCES AND ANALYSES

8.1 Introduction

This section addresses 18 discrete specific resource areas and conditions often encountered by proponents in their analyses of ARNG proposals. Information is given on the nature of each resource, how to describe it, and what matters to consider in evaluating the potential for, or severity of, effects.

The section also addresses three areas that are not resource-specific but rely on similar analytic approaches or directly affect the analyses themselves–cumulative effects, mitigation commitments, and consultation.

AR 200-2 notes that EAs should not exceed 25 pages in length and EISs should not exceed 150 pages in length. To meet these objectives, in treating each resource area proponents are urged to focus their baseline descriptions and analyses on only those matters that are relevant to their proposed actions.

- Resource areas and conditions that patently would not be affected by a proposed action should be identified and, based on brief explanation of their irrelevance, dismissed.
- In an EA there should be sufficient data and analysis of relevant resource areas and conditions to establish whether a proposal would result in significant effects.
- Discussion of significant impacts in an EIS should be sufficiently founded on data and analyses to enable the decision maker and the public to understand fully the import of proceeding with the proposal.

8.2 Aesthetics and Visual Resources

Aesthetic and visual resources refer to the natural and man-made features of the installation or project site landscape and include cultural and historic landmarks, landforms of particular beauty or significance, water surfaces, and vegetation. Together, these features form the overall impression that a viewer receives of an area or its landscape character.

The value of the affected setting is highly dependent on existing land use. An area that is primarily used for recreational and tourist activities is likely to be more visually sensitive than an area used for industrial purposes. Construction of housing in a setting used primarily for hiking and picnicking is far more likely to elicit adverse reaction than construction of housing in an urban area. Accordingly, a project could have very different impacts on aesthetic and visual resources depending on where it would be conducted. Visual resources and impacts should be described and assessed in the context of both the surrounding physical environment and current human activities.

Aesthetic and visual resources are assessed to help determine whether proposed actions would be compatible with the affected setting or would noticeably contrast with it. The importance of visual resources to an affected population is highly variable and strongly influenced by social considerations, including the current land use of the affected setting. Both the description of the affected environment and assessment of the consequences should be performed as objectively as possible, although visual and aesthetic resource impact analyses are by nature subjective.

ARNG actions can affect the aesthetic value of the proposal's project site and surrounding area, particularly if facilities or structures are constructed where none existed before. Specifically, an ARNG action could alter building densities and lead to modifications in roads and other infrastructure. These actions could result in potential changes in the local landscape. Physical changes to the affected setting should be consistent with current land uses and congruent with existing comprehensive plans that establish policies, directives, or regulations pertaining to visual resources.

Baseline information on visual resources can be collected by a variety of methods. Field surveys and photographs are good methods to determine the overall visual character of the area. Views should be taken from both inside and outside the project area. Areas visible from primary and secondary roads should be noted, with particular attention to any features that could be considered unique for the area.

State and local planning and parks departments should be contacted for adopted regulations and policies pertaining to aesthetics and visual resources.

Statutory and Regulatory Setting. Viewsheds are regulated by federal, state, and local land use and zoning codes. For example, local jurisdictions may independently designate scenic highways that are of local importance. Federal laws governing this resource are listed below.

- National Wild and Scenic Rivers Act
- National Trails Systems Act
- Federal Land Policy and Management Act (FLPMA) of 1976

Describing Existing Conditions. This section should describe factors that contribute to the visual characteristics of the project site and surrounding area. The ROI for this resource is defined by the proposed project's viewshed (the area from which the site is visible and the areas visible from the site). The location and nature of the surrounding built and natural area determine the ROI. Factors used in determining the ROI can include views from primary and secondary highways; lakes, streams, and coastal areas; hills or mountain areas; vegetation cover; and types of residential or industrial areas surrounding the site.

The description of the ROI's visual resources should encompass such features as architectural styles of existing buildings, extent and characterization of undeveloped and historic areas, and an overview of the landscape characteristics. The section should also describe important views from the project site, particularly for housing and recreation areas. Any federal, state, or local plans and policies that address the protection or importance of visual resources applicable to the area should be noted.

Information in this section should describe, as appropriate:

- *Landscape character*. Provide an overview of the visual characteristics of the project site and adjacent areas. These would include such features as lakes, streams, coastal areas, hills, mountains, vegetation, types of buildings/facilities, architectural styles, open and undeveloped areas, and important viewsheds.
- *Unique natural and man-made features of the landscape*. These would include unique features and well-known landmarks (e.g., waterfalls, unusual rock outcrops, monuments, and historic buildings).

- *Sensitive areas*. Identify the location of public lands, federally protected areas, and other visually sensitive areas.
- *Plans and policies*. Include local and regional plans and policies regulating visual resources.

When controversy or major concerns exist over particular aesthetic and visual resources, including photographs or maps showing the exact location of significant sites or viewsheds provides a better means of understanding the problem. A topographic map or cross section can also be useful in showing how a visual site can be seen from other areas, even far away.

Documenting Effects of the Proposed Action and Alternatives. Impacts on visual resources might include the following:

- Unsightly structures. Large or unusual structures, building materials, or colors can determine whether a structure is "unsightly." This determination is very subjective, but unsightliness can be better judged by making comparisons to adopted architectural guidelines and policies established by the installation or local community.
- Changing views of landscapes, landmarks, and other aesthetically important sites. The effects of new construction that blocks or alters important viewpoints should be described.
- Significant alterations to the landscape. Drastic changes to the landscape or skyline could occur if large development projects are initiated, if wooded areas are removed, or if extensive demolition of existing buildings occurs. In the case of demolition, the landscape could be beneficially affected if scenic views are uncovered. Another example is that some large overhead lights can create light pollution, changing the viewshed in the evening hours.

Significant visual impacts might result from projects that would

- Involve structures or land alterations visually incompatible with or obtrusive to the existing visual setting and landscape.
- Noticeably increase visual contrast and reduce the scenic quality rating from any high-sensitivity foreground or middle ground viewpoint.
- Block or disrupt existing views or reduce public opportunities to view scenic resources.
- Conflict with existing regulations and policies governing aesthetics and visual resources.

Mitigation measures can include the following:

- Use building designs, construction materials and colors, and landscaping that blend with existing structures and surroundings.
- Design structures to comply with installation policies or other local regulations regarding architectural requirements.
- Implement lighting systems and designs that minimize light pollution at night.
- Minimize the removal of trees and other vegetation, and revegetate areas disturbed during construction.
- Create building setbacks, install tree lines, or create elevated earthen walls to form buffers separating visually conflicting areas.

8.3 Airspace

The Federal Aviation Administration (FAA) manages all airspace within the United States and the U.S. territories. Airspace is defined in vertical and horizontal dimensions and also by time. The FAA recognizes the military's need to conduct certain flight operations and training within airspace that is separated from that used by commercial and general aviation. Airspace is a finite resource and must be managed to achieve equitable allocation among commercial, general aviation, and military needs.

The FAA has established various airspace designations to protect aircraft while operating near and between airports and while operating within airspace identified for defense-related purposes. Flight rules and air traffic control procedures govern safe operations within each type of designated airspace. Most military operations are conducted within designated airspace and follow specific procedures to maximize flight safety for both military and civil aircraft.

Controlled airspace is a generic term for the different types of airspace (Classes A, B, C, D, E, and G airspace) and defined dimensions within which air traffic control service is provided to instrument flight rules flights and visual flight rules flights in accordance with the airspace classification. The classifications of airspace are as follows:

- *Class A airspace.* This airspace occurs from 18,000 feet above mean sea level (MSL) to 60,000 feet above MSL. All operations within this airspace are in accordance with regulations pertaining to instrument flight rules (IFR) flights. This airspace is dominated by commercial aircraft using jet routes between 18,000 and 45,000 feet above MSL.
- *Class B airspace.* This airspace occurs from the surface to 14,500 feet above MSL around the Nation's busiest airports. Before operating in Class B airspace, pilots must contact controlling authorities and receive clearance to enter the airspace. Aircraft operating within Class B airspace must be equipped with specialized electronics that allow air traffic controllers to accurately track the speed, altitude, and position of the aircraft.
- *Class C airspace.* This airspace occurs from the surface to 4,000 feet above the airport elevation (charted in MSL) surrounding those airports that have an operational control tower, are serviced by a radar approach control, and meet specified levels of IFR operations or passenger enplanements. Aircraft operating within Class C airspace must be equipped with a two-way radio and an operable radar beacon transponder with automatic altitude reporting equipment. Aircraft may not operate below 2,500 feet above the surface within 4 nautical miles of the primary airport of a Class C airspace area at an indicated airspeed of more than 200 knots (230 miles per hour).
- *Class D airspace.* This airspace occurs from the surface to 2,500 feet above the airport elevation (charted in MSL) surrounding those airports that have a control tower. Class D airspace encompasses a 5-statute mile radius from the airport. Unless authorized otherwise by Air Traffic Control (ATC), aircraft must be equipped with a two-way radio. Aircraft may not operate below 2,500 feet above the surface within 4 nautical miles of the primary airport of a Class D airspace area at an indicated airspeed of more than 200 knots (230 miles per hour).
- *Class E airspace.* This airspace is any controlled airspace not designated as Class A, B, C, or D airspace. It includes designated federal airways, portions of the jet route system, and area low routes. Federal airways have a width of 4 statute miles on either side of the airway centerline and occur between the altitudes of 700 feet above ground level (AGL)

and 18,000 feet above MSL, but they may have a floor located at ground level at airfields without a tower. No specific equipment is required to operate within Class E airspace.

- *Class G airspace.* Class G airspace (uncontrolled) is that portion of the airspace that has not been designated as Class A, B, C, D, or E airspace. ATC does not have authority over operations within uncontrolled airspace. Primary users of Glass G airspace are visual flight rules (VFR) general aviation aircraft.

- *Special use airspace.* Special use airspace enables activities that must be confined because of their nature or require limitations on aircraft that are not a part of those activities. Prohibited and Restricted Areas are regulatory special use airspace. They are established in Federal Aviation Regulation (FAR) Part 73 through the rule-making process of the Administrative Procedures Act (Title 5 U.S.C. §§ 551-702). Warning Areas, Military Operations Areas (MOAs), Alert Areas, and Controlled Firing Areas are nonregulatory special use airspace. That is, the FAA may designate these types of special use airspace without resorting to the procedures demanded of the Administrative Procedures Act.

Analysis of airspace management and use involves considering many factors, including the types, locations, and frequencies of aerial operations; the presence or absence of already designated (controlled) airspace; and the amount of air traffic using or transiting through a given area. Proposed actions that are consistent with controlled airspace designations should typically be found not to present impacts on safety. Proposals for actions potentially inconsistent with airspace designations or that may pose a threat to the safety of other aircraft or persons or property require careful consideration, which often involves coordination with FAA officials. Where safety us a concern, the proponent should consult with the military representative at the FAA's regional field office.

Specific aviation and airspace management procedures and policies to be used by the Army are provided in AR 95-2, *Air Traffic Control, Airspace, Airfields, Flight Activities, and Navigational Aids*. Other applicable regulations regarding ARNG airspace management include *FAA Order 7490, "Policies and Procedures for Air Traffic Environmental Actions"* (contains procedures and guidance for special use airspace environmental issues between FAA and DoD); *FAA Order 7610.4H, "Special Military Operations"* (specifies procedures for air traffic control planning, coordination, and services during defense activities and special military operations conducted in airspace controlled by or under the jurisdiction of the FAA); and the *Memorandum of Understanding Between the Federal Aviation Administration and the Department of Defense Concerning Special Use Airspace Environmental Actions (26 January 1998)* (provides guidelines for compliance with NEPA and CEQ regulations without unnecessary duplication of effort by the FAA and DoD).

8.4 Air Quality

In planning projects and activities, installations must consider effects on air quality both on- and off-post. Two independent legal requirements govern consideration of air quality effects: (1) NEPA and (2) the general conformity provision of Clean Air Act (CAA) Section 176(c), including EPA's implementating regulation, the General Conformity Rule. Depending on the action and the project locale's attainment status with respect to the National Ambient Air Quality Standards (NAAQS), an installation might have to complete a separate conformity analysis in addition to the NEPA analysis. Applicability of the two requirements must be considered separately. Exemption from one requirement does not automatically exempt the action from the other requirement, nor does fulfillment of one requirement constitute fulfillment of the other.

Although installations should integrate compliance efforts to save time and resources, the two requirements are very different, necessitating separate analyses and documentation.

Current Laws and Regulations. The Clean Air Act Amendments of 1990 (CAAA-90) provide a comprehensive national program with the goal of reducing the levels of pollutants in the ambient air. The DoD strategy for air quality compliance includes prevention, control, and abatement of air pollution from stationary and mobile sources. The CAAA-90 provide the framework for the majority of air quality regulations and guidelines with which Army and ARNG installations must comply. The CAAA-90 are implemented by detailed federal, state, and local regulations.

ARNG responsibilities under the Clean Air Act depend on the circumstances prevailing at each installation. The various obligations may include the following:

- Obtaining necessary permits.
- Maintaining emissions within permitted levels.
- Complying with State Implementation Plan requirements.
- Ensuring that all CFC technicians attend EPA-certified training courses.
- Ensuring that all CFC recovery/recycling equipment is certified to EPA standards and venting prohibitions are maintained.
- Managing facilities with asbestos-containing material (ACM) and conducting ACM removals in conformance with the air toxics program requirements.
- Complying with applicable federal controls on mobile sources and their fuel.
- Developing risk management plans where required.
- Maintaining all required records and documentation.
- Managing facility construction and modification.

8.4.1 Air Quality Considerations under NEPA

NEPA requires broad consideration of the direct and indirect effects of a proposed action. The analysis of air quality under NEPA should include an investigation of the following aspects of the proposed action and alternatives.

Affected Environment. This section should include a description of air quality conditions present at the installation or other affected property. This description should include the attainment status of the installation, or other affected property, for all criteria pollutants and the air quality district in which the facility is located (available at http://www.epa.gov/air/data/maps.html). Air pollution sources that have permits should also be identified. In addition, any available information relative to the general air quality of the area should be included (i.e., ambient monitoring results).

Environmental Consequences. This section should discuss all long- and short-term changes to local air quality that could reasonably be expected to occur as a result of implementing a proposed action or alternatives. Some examples of possible environmental consequences are the following:

- Changes in the type or amount of air emissions due to changes in the operation of current air pollution sources or the addition of sources.

- Changes in air emissions due to construction activities (vehicular emissions and fugitive dust).
- Changes in local/regional ambient air quality due to changes in emissions.
- Potential exposure to asbestos during building demolition/renovation (if asbestos has not been removed before demolition/renovation).
- Changes in public opinion (favorable or adverse) due to projected changes in air quality, especially for incinerator projects.
- Effects on compliance status due to construction or modification of air emission sources.
- Effects on the timely attainment or maintenance of the NAAQS or any air quality standard or milestone contained in the State Implementation Plan (SIP) or Federal Implementation Plan (FIP).
- Downwind effects, particularly any that might disproportionately affect low-income or minority populations.

Consideration of Fugitive Dust. Construction activities can generate fugitive dust, which is regulated by the Clean Air Act (CAA) as particulate matter (PM) under NAAQS regulations. NEPA analyses should take into consideration the levels of fugitive dust that might be generated by an action and determine whether such levels would exceed limits in nonattainment areas or result in other potential adverse effects. If significant amounts of fugitive dust could be generated, mitigation measures such as the application of best management practices and other operational controls should be implemented with the action.

Significance Criteria. The environmental consequences described above should be compared to all applicable federal, state, and local regulations. These regulations provide an indication of the significance of various air quality parameters. Examples of significance criteria include the following:

- Source-specific emission limits
- Permitting and licensing requirements
- NAAQS
- State or local ambient air quality standards
- *De minimis* emissions levels outlined in the General Conformity Rule
- SIPs/FIPs
- Exposure of sensitive populations to pollutants
- Any other applicable regulations or standards

Mitigation. Strategies to reduce effects on air quality should be explored if significant adverse effects are anticipated. The following are possible mitigation techniques:

- During construction activities, application of dust suppressants or use of operational controls to prevent excess fugitive emissions.
- Acquisition of emission offsets.
- Use of air pollution control equipment.
- Transportation control programs.

8.4.2 General Conformity Rule Requirements

The General Conformity Rule (40 CFR Part 51, Subpart W) requires federal agencies to prepare written Conformity Determinations for federal actions in or affecting NAAQS *nonattainment* areas or *maintenance* areas (former nonattainment areas that have been redesignated as attainment areas based on NAAQS compliance). The requirements of the General Conformity Rule generally do not apply to actions in or affecting NAAQS attainment areas.

For actions that occur in nonattainment or maintenance areas, a written Conformity Determination is required *except* when the action is covered under the Transportation Conformity Rule or is specifically exempted under EPA's General Conformity Rule, which identifies several applicability exemptions (e.g., the total increase in emissions is *de minimis*). Current Army (and ARNG) guidance should be consulted to determine proper analysis, documentation, and signature authority requirements for exempt actions, including actions that result in emissions below *de minimis* levels. In those cases where an ARNG action is exempted from the General Conformity Rule, such as the routine maintenance and repair of roads and trails where an increase in emissions is clearly *de minimis*, the proponent should prepare a Record of Non-Applicability (RONA). Appendix GG provides a suggested format to be used in preparing a RONA. The RONA documents the ARNG's decision not to prepare a written Conformity Determination for an action and is signed by the proponent and the Environmental Program Manager. If a Conformity Determination is required, it must be based on a detailed air quality analysis. A determination is required for only the action that is approved, not for all alternative actions analyzed under NEPA. Specific guidance detailing conformity requirements and policies is provided in the *Department of the Army Guide for Compliance with the General Conformity Rule Under the Clean Air Act* (see Appendix HH).

Section 176(c) Conformity Requirements in Attainment Areas. Although the procedural requirements of the General Conformity Rule are not applicable to ARNG actions in or affecting NAAQS attainment areas, conformity with the SIP or FIP in these areas must still be ensured through NEPA analysis and documentation.

8.4.3 Integration of Conformity and NEPA

Both NEPA and the General Conformity Rule provide for public participation in the development and review of air pollution impact documentation. With appropriate planning, the installation can structure the public participation elements of both processes to allow for simultaneous review and comment on the relevant documents. Although integration in this manner will not be appropriate in all circumstances, the NEPA documentation should summarize the findings and conclusions contained in the Conformity Determination document prepared for the action. Two other potential areas for integration of the two processes are the selection of emission reduction measures and the analysis of effects. Specific requirements for integrating conformity with NEPA are included in the Army's conformity guidance document, provided in Appendix HH in this manual.

8.4.4 Separation of NEPA and Conformity

As previously discussed, the different legal requirements of NEPA and the General Conformity Rule dictate that the installation conduct separate processes that result in separate documents. The analysis necessary to satisfy the requirements of the General Conformity Rule differs from traditional NEPA analysis in several ways. For example, a written conformity analysis is required for only the preferred alternative, not for all alternatives under NEPA, and is limited to

the criteria pollutants for which the area is in nonattainment. In addition, even when the installation believes that a proposed action could be categorically excluded under NEPA, conformity review may still be required. The ARNG must maintain thorough administrative records for each process to substantiate the separate administrative decisions and conclusions.

8.5 Biological Resources

The concepts of ecosystems and biological resources are central to NEPA. Section 102(2)(H) of NEPA requires that analyses conducted will consider "ecological information" in planning and development.

A description of biological resources provides the essential baseline conditions against which impacts of the proposed action and alternatives are evaluated. The description should emphasize those biological resources which are expected to be affected by the action under consideration or that have particular significance on a local, regional, or national level. Issues specifically addressed under the topic of biological resources include vegetation, fish and wildlife, sensitive species, sensitive habitats, and wetlands. Direct and indirect impacts that result in the temporary loss of native vegetation, populations or species of fish and wildlife, sensitive species, and sensitive habitats must be considered for any action involving disturbance in naturally vegetated areas. Because of the unique ecological and regulatory issues associated with wetlands, this particular resource topic is discussed separately under Section 8.19 in this manual.

Statutory and Regulatory Setting. The following statutes impose specific regulatory requirements pertaining to the treatment of biological resources on federal property. Federal statutes and Executive Orders relevant to environmental impact analysis are described in Appendices HH through OO, respectively.

- AR 200-3 (*Natural Resources—Land, Forest and Wildlife Management*)
- Endangered Species Act (ESA)
- Migratory Bird Treaty Act
- Sikes Act
- Fish and Wildlife Coordination Act of 1980
- Bald and Golden Eagle Protection Act
- Magnuson-Stevens Fisheries Management and Conservation Act
- Marine Mammal Protection Act

8.5.1 Compliance and Documentation Steps

Section 7 of the ESA requires federal agencies to coordinate with the U.S. Fish and Wildlife Service (USFWS) or the National Marine Fisheries Service (NMFS) (the "Services") to ensure that any proposed action that the agency authorizes, funds, or carries out is not likely to result in adverse impacts on threatened or endangered species or critical habitats. NMFS has jurisdiction over marine fish, anadromous fish, sea turtles, and marine mammals. Consultation, conference, and biological assessment procedures under Section 7 should be integrated with NEPA procedures to the maximum extent feasible. Simultaneous compliance with NEPA and ESA procedures minimizes duplication of effort and avoids delay. Installations may combine ESA and NEPA documentation (such as the biological assessment and environmental assessment) to reduce paperwork as long as the requirements of both statutes are met. Generally, an installation

should determine the effect of a proposed action on listed species or critical habitat in accordance with ESA Section 7 *before* completing the NEPA analysis. Avoiding consultation with either or both of the Services to accelerate the NEPA process is counterproductive and is not an acceptable ARNG practice. The following subsections discuss appropriate procedures for achieving compliance with respect to matters under the cognizance of the Services. Germane regulations are published at 50 CFR Part 402.

Informal consultation. Informal consultation typically begins with a written inquiry to the Service about the presence or absence of listed and/or proposed species or critical habitat in the proposed project area.

- Within 30 days of receipt of the notification of or request for a species list, the Service will either concur with or revise the list provided or advise the ARNG of any listed, proposed, or candidate species or designated or proposed critical habitat present in the area of the proposed action. Candidate species are those being considered for listing as threatened or endangered but not yet protected under the ESA..
- If the Service advises that listed species or critical habitat are not likely to be present, the consultation requirement is met, and the Service will notify the ARNG of this in writing. No further consultation is required.
- If a listed species or critical habitat might be present, the Service will provide the Army with information or references regarding the species or habitat. The Service may recommend that additional studies or surveys be conducted to make a more precise determination.
- If the Service advises that listed species or critical habitat might be present, the Army will be required to conduct a biological assessment. A biological assessment is optional if only proposed species or proposed critical habitat is involved. However, if both listed and proposed species or habitat are present, a biological assessment is required and must address both proposed and listed species or habitat.

Biological assessment. The purpose of the biological assessment is to help make the determination of whether the proposed action is "likely to adversely affect" listed species and critical habitat. Procedures for conducting a biological assessment are as follows:

- The contents of the assessment are discretionary, but they generally include results of on-site inspections determining the presence of listed or proposed species; an analysis of the likely effects of the action on the species or habitat based on biological studies, review of the literature, and the views of species experts; and a description of cumulative effects reasonably certain to occur within the action area that are likely to affect the species.
- If preparation of a biological assessment is not begun within 90 days of receipt of a concurrence or list of species from the Service, the Army must verify with the Service that the list is still accurate.
- If a biological assessment was prepared for a previous action that was identical or very similar to the proposed action, the Army may incorporate the previous biological assessment by reference in a written certification.
- If conducting a biological assessment will require a taking of a listed species, a permit must be obtained.
- A biological assessment must be completed within 180 days of receipt of a species list or concurrence with a species list from the Service. The biological assessment is submitted

to the Service, and a written response of concurrence (or nonconcurrence) will be issued within 30 days.

- The Service may suggest modifications to the action to avoid the likelihood of adverse effects.
- If the Service determines that the proposed action is not likely to adversely affect listed species or critical habitat, no further action is required.
- If the Service determines that the action is likely to adversely affect listed species or critical habitat, a formal consultation is required.
- The ARNG should obtain a determination from the Service in writing regardless of the decision and should include the determination in the final NEPA document.

Formal consultation. Formal consultation is required if the ARNG determines that a proposed action is likely to affect listed species or critical habitat. Formal consultation is not required if, as the result of preparation of a biological assessment or as a result of informal consultation the Service determines that the proposed action is not likely to adversely affect listed species or critical habitat. Initiate a formal consultation with a written request submitted to the Service. The request should include

- A description of the proposed action.
- A description of the specific area that might be affected by the proposed action.
- A description of any listed species or critical habitat that might be affected by the proposed action.
- A description of the manner in which the action might affect the listed species or critical habitat, and an analysis of cumulative effects.
- Relevant reports, including EISs, EAs, or biological assessments. The information submitted should be the best scientific and commercial data available.
- Any other relevant information on the proposed action, the listed species, or critical habitat.
- Formal consultation concludes within 90 days after its initiation unless extended by mutual agreement between the ARNG and the Service.

Biological opinion: The Service will issue to and discuss with the ARNG its biological opinion as to whether the proposed action, together with cumulative effects, is likely to jeopardize the continued existence of listed species or result in the destruction or adverse modification of critical habitat.

- In the case of a "jeopardy" opinion, the Service will suggest reasonable and prudent alternatives, if any, to the proposed action.
- If the Service concludes that the proposed action and any resultant cumulative effects on listed species will not violate the ESA, the Service will specify the incidental take of listed species allowable and suggest reasonable and prudent measures, if any, that the ARNG can take to minimize incidental takings of listed species as a result of the proposed action.
- The ARNG should notify the Service of its final decision on the proposed action if a jeopardy opinion is received.

- If the ARNG determines that it cannot comply with the ESA after consultation with the Service, it may apply for an exemption.

Formal consultation should be reinitiated if:

- The amount of taking specified by the Service is exceeded.
- New information reveals effects of the identified action that were not previously considered.
- The identified action is modified in a way that could cause an effect to a listed species or critical habitat not previously considered.
- A new species is listed or critical habitat designated that may be affected by the identified action.

It is strongly recommended that the Section 7 process be completed and the results incorporated into the final NEPA document before release of a FNSI or ROD.

8.5.2 Content and Organization of Analysis

The types of information that should be used to describe vegetation; fish and wildlife species; endangered, threatened, and rare species; and sensitive habitats in the affected environment section of an impacts analysis are discussed below.

Vegetation. The following information should be included to adequately describe the species composition and distribution of vegetation in the vicinity of the project site:

- Principal habitat types occurring on the installation, including the approximate size (in acres) of each.
- The location of each habitat type on the installation, particularly within the project area, depicted graphically.
- Regional significance, if any, of those habitat types.
- Floral surveys conducted on the installation, especially within the project area, and the dates of those surveys.
- Native plant species documented at and around the project site.
- Exotic/ornamental plant species documented at and around the project site, including all noxious weeds.
- Ongoing vegetation management programs.

For all plant species mentioned in the environmental assessment, the common name should be written first, followed by the botanical name in parentheses. If there are numerous (more than about 15) plant species to report in this section, it is most effective to present the list in a table and include it as an appendix. In the body of the text, however, listing only the dominant plant species or those with particular relevance, such as noxious weeds that have the potential to spread as a result of the proposed action, is appropriate. The plant list appendix should be referenced.

Fish and Wildlife. The fish and wildlife portion of the biological resources section should include detailed information about fish and wildlife species documented in the vicinity of the project site. If surveys have not been conducted, a list of species known to occur in the region—and thus potentially occurring on the installation—should be provided. Included in the description of fish and wildlife resources should be both game and nongame species and invertebrate species, if

known. For all fish and wildlife species mentioned in the document, both scientific and common names should be included. Similar to listing plant species, fish and wildlife species should be listed in paragraph form or, if the number of species is too numerous to include as a paragraph, listed in a table and included as an appendix. Information to include in the description of fish and wildlife resources is as follows:

- Nongame species of mammals, birds, reptiles, amphibians, and fish known to occur, or potentially occurring, in the vicinity of the project site.
- Game species of mammals, birds, and fish in the vicinity.
- Resident status of bird species on the installation (e.g., which birds are known to nest in the vicinity, which over-winter there, which species are neotropical migrants).
- Invertebrate species known or potentially occurring in the vicinity.
- Wildlife management areas, preserves, or refuges.
- Wildlife management programs.

Endangered, Threatened, and Rare Species. Endangered, threatened, and rare species warrant special treatment in a NEPA document, due in part to the large size of many installations and the historic protection of wildlife habitats afforded by the military to endangered species habitats. Though only federally listed species are protected under the ESA, the ARNG is increasingly addressing the protection of state-listed species on military installations as a matter of responsible stewardship and as a requirement under the state laws to which the ARNG is subject. To that end, it is appropriate and beneficial to confer with state fish and wildlife agencies during the NEPA process.

As previously mentioned, Section 7 consultation with the USFWS and appropriate state agencies is strongly recommended during the NEPA process. Consultation with these agencies not only will provide current information on federal and state-listed species occurring on the installation, and thus potentially affected by the proposed action, but also can lead to a discussion of alternative courses of action in a "might affect" situation. Inquiry letters and agency response letters should be included as an appendix to the environmental impact analysis document.

The affected environment section for endangered, threatened, and rare species should clearly and accurately present the following information:

- A current list of all federal and state-listed endangered, threatened, and rare species present within the project site, indicating specifically whether nesting or other breeding activity is occurring. Include source(s) of information.
- A current list of all federal and state-listed endangered, threatened, and rare species occurring in the region (potentially occurring in the project area). Include source(s) of information.
- The up-to-date rarity status (e.g., federally endangered, federal species of concern, state threatened) of each species, including both federal and state statuses if applicable. For rare species, the global status (e.g., G1, G2, G2/G3) should also be mentioned. Global rarity ranks have been defined by The Nature Conservancy.
- Information on the habitat preferences of each sensitive species.

- A description of conservation programs conducted for each species.
- Locations, as shown on a generalized map, of each species on the installation.[27]

Lists of sensitive species (using both common and scientific names) and their rarity status should be provided in tabular form. Other information to include in the table(s) is a general description of the species' preferred habitat, including all host species, and a brief description of its abundance on the installation.

Sensitive Habitats. Sensitive habitats include areas with some conservation value. The conservation value can be recognized either by the federal government, because of the presence of an endangered or threatened species or the natural area's designation as critical habitat, or by a state agency, because of the presence of state-listed species or its significance as a regionally threatened ecosystem. For example, a high-quality remnant of tallgrass prairie in Illinois—a threatened ecosystem in the midwestern United States and designated "significant natural area" under the Illinois Natural Areas Preservation Act—would be treated as sensitive habitat in a NEPA document.

Informal Section 7 consultation is also recommended when faced with a potential impact on sensitive habitat. Initiating a dialogue between the ARNG and appropriate agencies early in the NEPA process can facilitate discussion of alternative courses of action in a "might affect" situation.

The following information should be included to describe sensitive habitats on an installation:

- The presence and location of any critical habitat.
- The presence and location of ecosystems or microhabitats of local, regional, or national significance, including the reasoning for such designation.
- Characterization of the unique or significant biological or physical features of the sensitive habitats.
- Mention of dominant plant species.
- Biodiversity ranks for the habitats, if known.
- Any state regulations applicable to the conservation of the sensitive habitats.
- Management programs conducted by the installation to protect sensitive habitats.

8.5.3 Documenting Predicting Consequences

Analysis. Evaluating potential impacts on biological resources involves two aspects—assessing impacts on resources affected by the proposed action and identifying the circumstances and environmental conditions under which the impacts would be significant. Because of the lack of quantitative models applicable to this process, much of the assessment is qualitative in nature and relies primarily on the expertise and judgment of the assessor(s). Arguably, the element most critical to the analysis, however, is the dialogue between the ARNG and federal and state consultation agencies. The agencies provide information on sensitive species and habitats located

[27] When depicting locations of these species, it is important to show or describe them only in relation to the proposed project site. Including precise latitude and longitude coordinates is not appropriate in a NEPA document and could result in increased disturbance to a vulnerable species. The most important aspect of showing species locations is their proximity to the site of the proposed action.

on the installation or in the vicinity of the project site and can inform the ARNG, early in the NEPA process, as to whether the proposed action is consistent with the requirements of the ESA.

For each alternative, the environmental consequences section for biological resources should relate the following information:

- The vegetation, fish and wildlife, sensitive species, and sensitive habitats that would be permanently lost as a result of the proposed action.
- The biological resources that would be temporarily lost, and when and how those resources would be restored.
- Disturbances to biological resources, terrestrial wildlife species in particular, that would occur during and/or following implementation of the proposed action.
- The outcome of the informal consultation process between the Army and USFWS/NMFS.
- The outcome of the informal consultation process between the Army and state natural resource agencies.
- Mitigation measures to offset the loss of vulnerable biological resources, including how and when those measures would be accomplished.

Description of Effects. The following are typical impacts on specific biological resources from ARNG activities.

- Vegetation. The clearing of a naturally vegetated area to construct new facilities, resulting in the loss of native plants, is the most apparent direct adverse impact on this resource area. Other direct effects could include the spread of invasive plant species into disturbed areas, the loss of native plant productivity, and increased habitat fragmentation. An indirect effect to consider is the degradation of aquatic ecosystems caused by contaminated runoff and increased sedimentation associated with ground-clearing, construction activities, and a variety of field training activities. The impact evaluations not only should consider the local significance of the vegetation loss, but also should frame the loss in a wider regional and national context when appropriate.
- Fish and Wildlife. Direct adverse impacts on fish and wildlife resources can be described in terms of reduced carrying capacities for a particular habitat type, diminished habitat quality, specific numbers of acres of habitat converted to other land uses, or actual number of animals eliminated from the area as a result of implementing the proposed action. Recreational impacts associated with the reduced fish and wildlife resources should also be described (e.g., reduced hunter days, decreased opportunity for bird watching and other nonconsumptive uses). In some cases, a direct beneficial impact to consider would be the conversion of a demolished facilities site to open space, thus providing additional habitat for wildlife species. Indirect impacts on fish and wildlife may result from increased noise and human activity associated with the proposed action (e.g., a construction project). These indirect effects may be short-term, occurring only during limited times, or they may be long-term, occurring from an increased human presence in the project area.
- Sensitive Species. Potential adverse effects on sensitive species could include the loss of habitat (a direct effect) or disturbance to breeding activity (indirect effect). Other disturbances from noise and an increased human presence may result in the displacement of species from the project area or entire installation. These effects may be long- or

short-term. Results of agency consultation should be included in the discussion of impacts.

- Sensitive Habitat. Potential adverse effects include the loss of or disturbance to sensitive habitat. Examples of disturbances to these habitats include the trampling of sensitive plant species, alteration of successional stages, disruption of ecological processes, and removal of potential nest sites for sensitive species. Results of agency consultation should be included in the discussion of impacts.

Actions may trigger an EIS requirement if they would result in a direct or indirect significant impact on a federally listed species or loss of critical or sensitive habitat. In the case of an adverse effect, the requirement can often be avoided by mitigation proposals to alter the location or timing of the project. However, the mitigation proposals must be suggested or approved by the USFWS or NMFS and/or appropriate state agency.

The following are examples of avoidance and minimization measures for impacts on vegetation and fish and wildlife:

- Maintaining large blocks of native vegetation by clustering facilities where feasible.
- Landscaping with native, low-maintenance vegetation.
- Limiting the use of herbicides to control noxious weeds.
- Maintaining blocks of habitat and known wildlife travel corridors where feasible.
- Timing construction activities to occur outside the breeding season of sensitive wildlife species.
- Maintaining an 800-foot buffer around bald eagle nest sites.

Data Sources. The environmental management offices at installations typically are the best sources for site-specific biological information. These offices can often provide land use plans, recent EAs and EISs prepared for projects on the installation, environmental baseline surveys, results of biological studies conducted on the installation, floral and forest inventories, wildlife inventories, integrated natural resources management plans, endangered species management plans, game species management plans, landscape plans, and other natural resources planning materials containing information on baseline biological conditions.

The ITAM program supports the myriad natural/biological resource management requirements on Army and ARNG training lands. An important aspect of the program is the Land Condition Trend Analysis (LCTA) component, which serves as a good source of characterization data. Annual LCTA Summary Reports are a requirement of the program and provide a description of the status and trends of training land conditions, as well as an assessment of the likely or potential causes of impacts. On many installations, the ITAM program and the environmental management office have the infrastructure and the biological resources entered into a geographic information system (GIS) database. GIS is capable of providing a wide variety of quantitative analysis, as well as producing spatial graphics that can be used to identify the existing or potential conflicts that various actions would have with biological resources.

If site-specific biological resources information is not available from the installation, the next best source for regional data is state natural resources agencies. These agencies often maintain a database of vegetation community types, wildlife species, and rare plants and animals present within their jurisdiction. The Natural Heritage Program is an especially good source of these data. Other organizations, such as The Nature Conservancy (regional offices) and local or state-

based conservation organizations, also might be able to provide regional biological information.

Specific data sources and the information available from them include the following: satellite imagery (vegetation cover, location of surface water resources); aerial photography (impacted areas, vegetation community types and cover); U.S. Geological Survey (USGS) topographic maps (slope, aspect, roads, boundaries); U.S. Department of Agriculture, Natural Resources Conservation Service (USDA-NRCS) Standard Plant List (national list of official plant names); USFWS (list of endangered, threatened, and candidate species; wetlands mapping), state natural resource agencies (state-listed endangered, threatened, and rare species; significant natural areas/habitat types), The Nature Conservancy (threatened, endangered, and rare species; habitats of regional and/or global significance), ITAM Support Center at the U.S. Army Construction Engineering Research :Laboratory (vegetation, wildlife, land use), and the U.S. Army Environmental Center (land use issues, natural resources technical policy and guidance).

8.6 Cultural Resources

8.6.1 Background

NEPA requires consideration of "important historic, cultural, and natural aspects of our national heritage" but provides no specific definition of these terms. Statutory and regulatory requirements, however, give highly relevant guidance on their meanings. Drawing on the various authorities, cultural resources for NEPA analyses should be considered to include

- Historic properties, as defined in the National Historic Preservation Act (NHPA).
- Cultural items, as defined in the Native American Graves Protection and Repatriation Act (NAGPRA).
- Archeological resources, as defined in the Archeological Resources Protection Act (ARPA).
- Historic and paleontological resources, as defined by the Antiquities Act.
- Sites that are scientifically significant, as defined by the Archeological and Historic Data Preservation Act (AHPA).
- Sacred sites, as defined in Executive Order 13007 (to which access is provided under the American Indian Religious Freedom Act (AIRFA).
- Collections, as defined in 36 CFR Part 79 (*Curation of Federally-Owned and Administered Collections*).

8.6.2 Current Laws and Regulations

NEPA is but one authority for considering a project's effects on cultural resources. A number of federal laws define and set requirements for the identification and treatment of cultural resources. At a minimum, the following laws, regulations, and other requirements must be taken into consideration when determining the effects of a project on cultural resources. Note that compliance with NEPA alone does not satisfy the applicable requirements of these laws, nor does compliance with these laws preclude the need to comply with NEPA.

National Environmental Policy Act (NEPA). The proponents of ARNG actions will ensure that cultural resources are fully considered when preparing NEPA analysis and documentation. NEPA documents will include a comprehensive assessment of the impacts of proposed ARNG actions or activities on cultural resources. However, compliance with NEPA for a specific action

does not relieve the ARNG of the independent compliance procedures associated with applicable cultural resources requirements. Information and findings obtained through compliance with cultural resources statutes, regulations, Executive Orders, and Presidential memoranda should be integrated into the concurrent NEPA compliance process and associated documents.

NEPA analyses must consider the effects of proposed federal actions on cultural resources and the effects on American Indians, Native Hawaiians, Alaska Natives, and other ethnic and social communities to which the cultural resources might have importance. The information needed to make such impact assessments can be acquired from information developed as a result of compliance with cultural resources statutes, regulations, and Executive Orders.

National Historic Preservation Act of 1966, as amended (NHPA). The NHPA establishes the federal government's policy to provide leadership in the preservation of historic properties and to administer federally owned or controlled historic properties in a spirit of stewardship. The ARNG must administer, manage, and treat historic properties in accordance with the NHPA. The installation commander must also identify, evaluate, and nominate historic properties for listing in the National Register of Historic Places.

The installation commander must identify, evaluate, and take into account the effects of all "undertakings" on historic properties in accordance with the procedures set forth in 36 CFR Part 800 and Section 106 of the NHPA. An "undertaking" is defined as any project or activity with federal control, approval, or funding that has the potential to affect historic properties. The installation commander is responsible for seeking the comments of the Advisory Council on Historic Preservation (ACHP) on undertakings that affect historic properties. The State Historic Preservation Officer (SHPO) participates significantly in the Section 106 compliance process by providing input on efforts to identify, evaluate, and consider effects on historic properties. If an undertaking might affect properties that have religious and cultural significance to a federally recognized Indian tribe, the tribe must be afforded the opportunity to participate as interested persons during the consultation process outlined at 36 CFR Part 800. Failure to take the effects of an undertaking on historic properties into account in accordance with NHPA Section 106 and 36 CFR Part 800 can result in formal notification from the ACHP to the Secretary of the Army of foreclosure of the ACHP's opportunity to comment on the undertaking pursuant to the NHPA. A finding of foreclosure by the ACHP means that the ARNG has not complied with Section 106 and is vulnerable to litigation from an outside party. An overview of the basic steps of Section 106 review is presented in Figure 8-1.

Section 110 of the NHPA imposes specific responsibilities on federal agencies regarding historic preservation. The affirmative preservation responsibilities in Section 110 must be balanced in a manner consistent with the mission and include, but are not limited to, the following: establishing a historic preservation program that includes the identification, evaluation, and nomination of historic properties to the National Register of Historic Places in consultation with the ACHP, SHPO, local governments, Indian tribes, Native Hawaiian organizations, and the interested public as appropriate; using available historic properties to the maximum extent feasible prior to acquiring, constructing, or leasing new buildings; mitigating through documentation of historic properties that will be altered or destroyed as a result of a proposed ARNG action; and ensuring that significant historic features are appropriately preserved in transferring ARNG historic properties.

American Indian Religious Freedom Act of 1978 (AIRFA) and Executive Order 13007 (Indian Sacred Sites). AIRFA applies First Amendment guarantees of religious freedom to Native Americans. In accordance with AIRFA and Executive Order 13007, ARNG commanders must

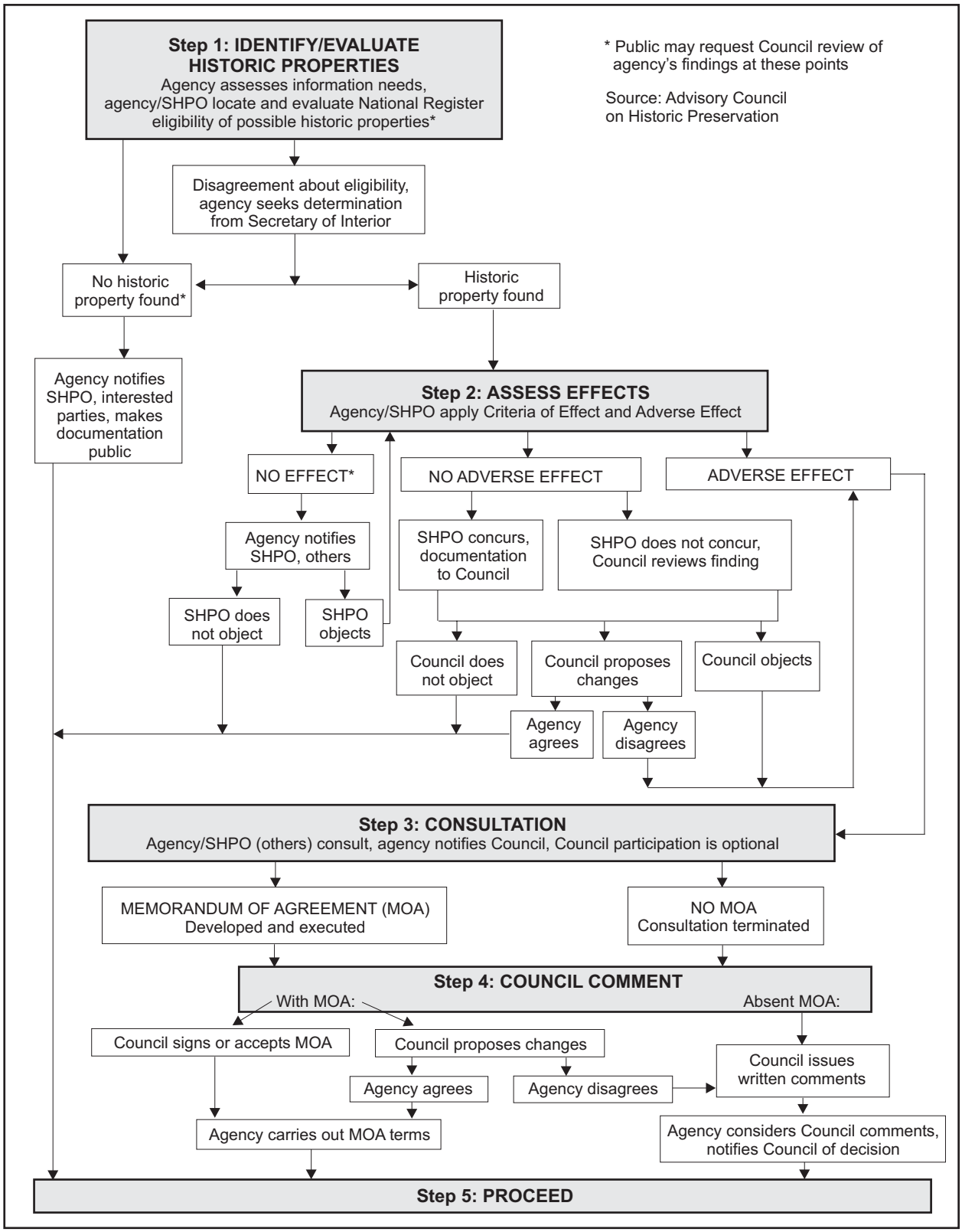


Figure 8-1. The Basic Steps to Section 106 Review

develop and implement procedures to protect and preserve the American Indian, Eskimo, Aleut, and Native Hawaiian right of freedom to believe, express, and exercise their traditional religions, including but not limited to access to sacred sites, use and possession of sacred objects, and freedom to worship through ceremonials and traditional rites on all DoD lands.

The ARNG must consult with tribes and Native Hawaiians to identify sacred sites that are necessary to the exercise of traditional religions and provide access to ARNG installations, or other property used by the ARNG, for the practice of traditional religions, rights, and ceremonies. Installation commanders must maintain the confidentiality of sacred site locations.

Commanders must avoid adversely affecting the physical integrity of sacred sites and establish procedures to ensure reasonable notice is provided to federally recognized Indian tribes and Native Hawaiian organizations when proposed actions or land management policies and practices might restrict future access to or ceremonial use of sacred sites or adversely affect the physical integrity of such sites.

ARNG protection of cultural resources affiliated with Native Americans, Native Hawaiians, and Alaska Natives includes adherence to additional federal and DoD policies concerning recognition of Indian tribal governments. The U.S. Constitution distinguishes between the federal government, state governments, and tribal nations. The relationship between the federal and tribal governments has evolved through treaty, Supreme Court rulings, and federal legislation. Tribal governments maintain sovereignty over a range of issues, including cultural resources. Since 1968 the trend in federal policy has been to increase tribal sovereignty and self-determination. Accordingly, protection of cultural resources operates within the policy of the federal government to respect the sovereign nation status of Indian tribal governments.

Native American Graves Protection and Repatriation Act (NAGPRA). The intent of NAGPRA is to identify proper ownership and to ensure the rightful disposition of cultural items that are currently in federal possession or control. NAGPRA mandates that installation commanders summarize, inventory, and repatriate cultural items in the possession or control of the installation to lineal descendants or to culturally affiliated federally recognized Indian tribes or Native Hawaiian organizations. NAGPRA also requires that certain procedures be followed when there is an intentional excavation or inadvertent discovery of cultural items on federally owned lands. ARNG commanders must ensure compliance with NAGPRA (25 U.S.C. 3002) and its implementing regulation (43 CFR Part 10).

Antiquities Act of 1906, Archeological Resources Protection Act of 1979 (ARPA), and Archeological and Historic Data Preservation Act of 1974 (AHPA). The Antiquities Act of 1906 and ARPA prohibit the excavation, collection, removal, and disturbance of archeological resources (as defined by ARPA) and objects of antiquity (as referenced in the Antiquities Act) on federally owned ARNG property without a permit issued by the USACE District Real Estate Office or the approval of the installation commander. Violation of ARPA may result in the assessment of civil or criminal penalties and forfeiture of vehicles and equipment used in connection with commission of the violation.

The AHPA specifically provides for the survey and recovery of scientifically significant data that might be irreparably lost as a result of any alteration of the terrain from a federal construction project or federally licensed project, activity, or program. Installation paleontological resource management requirements will be integrated into Installation Cultural Resource Management Plans and will establish and include installation policy for limitation of collection and removal of paleontological resources. Known paleontological resources must also be addressed in any

NEPA documentation prepared for actions that might affect or cause irreparable loss or destruction of such resources.

36 CFR Part 79, Curation of Federally Owned and Administered Archeological Collections. The ARNG must ensure that federally owned and controlled archeological collections and associated records, as defined in 36 CFR 79.4(a), are processed, maintained, and curated in accordance with the requirements of 36 CFR Part 79. However, NAGPRA cultural items and human remains in the ARNG's possession and control must be disposed of in a manner consistent with the requirements of NAGPRA and 43 CFR Part 10.

Presidential Memorandum for Heads of Executive Departments and Agencies on Government-to-Government Relations with Native American Tribal Governments (April 29, 1994). This memorandum requires that consultation between the ARNG and federally recognized Indian tribes occur on a government-to-government basis. ARNG personnel must treat designated representatives of federally recognized Indian tribal governments as representatives of a sovereign government. Consultation with federally recognized Indian tribes on a government-to-government basis occurs formally and directly between installation commanders and heads of federally recognized tribal governments. Installation and tribal staff-to-staff communications do not constitute formal government-to-government consultation but are normally necessary prerequisites to formal consultation.

Executive Order 13175 (*Consultation and Coordination with Indian Tribal Governments)* was issued on November 6, 2000, to replace Executive Order 13083. The new Executive Order establishes a policy that federal agencies will respect Indian tribal self-government and sovereignty, honor tribal treaty and other rights, and strive to meet the responsibilities that arise from the unique legal relationship between the federal government and Indian tribal governments. To this end, federal agencies are to consult with tribal officials as to the need for federal standards and any alternatives that would limit the scope of federal standards or otherwise preserve the prerogatives and authority of Indian tribes. The Executive Order specifically cites the Presidential Memorandum of April 29, 1994, which further obligates federal agencies to "assess the impact of Federal Government plans, projects, programs, and activities on tribal trust resources and assure that tribal government rights and concerns are considered during the development of such plans, projects, programs, and activities."

Specific policies, procedures, and responsibilities of the ARNG in meeting cultural resources compliance and management requirements are contained in AR 200-4 and in DA PAM 200-4. In addition, the NGB has issued its *Integrated Cultural Resources Management Plans and Consultation Guidance* (All States Log I01-0026, February 8, 2001). This resource, provided at Appendix PP, provides complete guidance for dealing with Native Americans.

8.6.3 Incorporating Cultural Resources into the NEPA Process

The key to the successful balance of mission requirements and cultural resources compliance responsibilities is early planning, coordination, and effective management to prevent conflicts between the mission and the managed resources.

ARNG personnel at all levels must ensure that mission requirements are carried out in harmony with the statutory and regulatory requirements concerning cultural resources. Failure to fulfill these requirements could result in halting or delaying ongoing or proposed mission-essential projects, training, and testing actions, and could strain financial and staff resources. Proponents of ARNG actions should coordinate with the Cultural Resources Manager or other local experts

early in the planning stage of projects and activities to identify potential cultural resources compliance requirements.

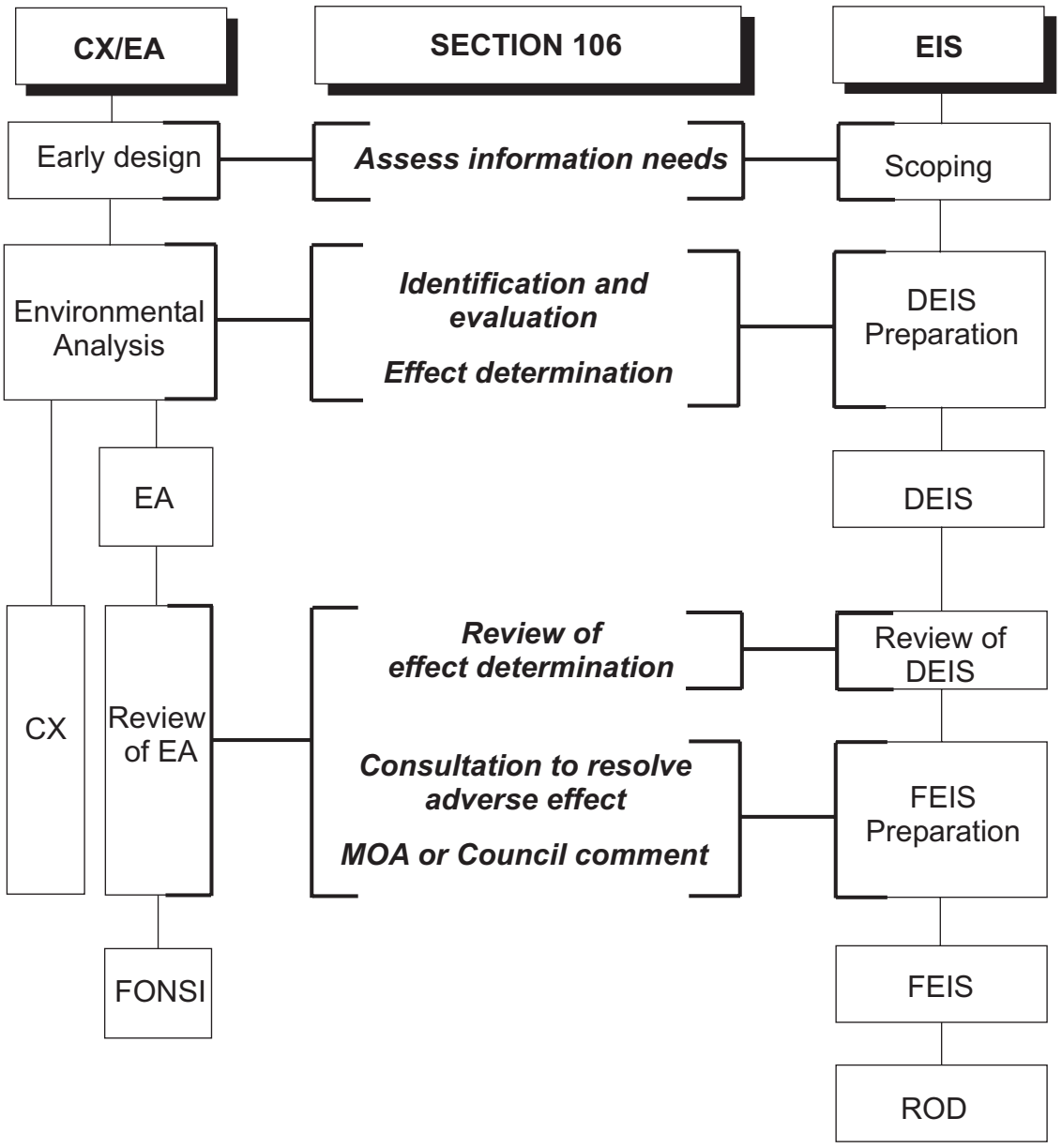
NHPA Section 106 Process and NEPA. Compliance with the NHPA Section 106 process (as well as NEPA evaluation) is accomplished by first identifying and determining the National Register eligibility of historic properties located within an undertaking's area of potential effect (APE). The APE is the geographic area or areas within which an undertaking might directly or indirectly cause changes in the character or use of historic properties. Effects of the undertaking on historic properties are evaluated using the criteria provided in 36 CFR 800.9(a). The direct and indirect effects of federal undertakings are adverse effects if they result in loss, alteration, or destruction of properties on or determined eligible for listing on the National Register. Transfer, lease, or sale of historic properties without adequate preservation restrictions or mitigation measures is also considered to be an adverse effect. When an undertaking will have an adverse effect on historic properties, the ARNG must consult with the appropriate SHPO, interested parties, and the ACHP, as appropriate, to avoid, eliminate, reduce, or mitigate the adverse effect. The results of these consultations must be taken into consideration as part of the process for the NEPA document.

Under the extreme circumstances of a major natural disaster or an imminent threat to the national security, a waiver of federal agency responsibilities under Section 110 of the NHPA may be obtained (36 CFR Part 78). However, a waiver of responsibilities under Section 110 does not affect an agency's Section 106 responsibility to consult with the ACHP for comments regarding the effects of the emergency activities on properties included in or eligible for the National Register of Historic Places.

When considering whether a project will have an adverse effect on traditional cultural properties, efforts must be made to identify and consult with appropriate Indian tribes or Native Hawaiian organizations that have historical ties to the project area. For NEPA projects, it is recommended that consultations for traditional cultural properties be handled at the same time as the NHPA Section 106 consultation. This approach is recommended for several reasons. First, many of the cultural resources identified during the historic properties inventory required by the NHPA are of specific interest to Native American and Hawaiian groups. Second, ACHP regulations call for consultation with traditional tribal cultural leaders as part of the NHPA Section 106 process. Additionally, NAGPRA established Indian tribe and Native Hawaiian organization ownership of their respective human remains and items of cultural patrimony, and it requires consultation with these groups to determine appropriate disposition of such items.

The APE for cultural resource evaluations is the geographic area that could experience any possible effects of an undertaking, either direct or indirect. The APE for an ARNG facility would include not only the land within the installation boundary but also outside areas that might be directly or indirectly affected by the proposed action or alternatives. A common-sense approach must be taken in identifying the APE. The direct and indirect effects must be readily identifiable and actually caused by the undertaking. The APE for NEPA purposes might not be the same as that defined for the NHPA; therefore, care must be taken to identify the meaning and context of the term when using it in various documents.

Section 106 compliance requirements should be integrated into NEPA analyses (see Figure 8-2). Optimally, all surveys or studies and determinations should be completed and the results included in the NEPA document. In those instances where it is not possible to complete the Section 106 process within the time frame scheduled for NEPA documentation preparation, all current information concerning the status of completed and ongoing historic property inventory studies



Note: This figure represents an ideal coordination between NHPA and NEPA, not a required process. The coordination effort may not always happen according to the steps shown.

Source: Advisory Council on Historic Preservation

Figure 8-2.
Coordinating Section 106 and NEPA Reviews

and Section 106 consultations should be included in the NEPA document. The NEPA document should also note that the Section 106 consultation process will be completed before the proposed action is initiated.

There are, therefore, two options for integrating the NHPA into the NEPA process: (1) complete the cultural resource inventory and assessment work, determine mitigation measures, and coordinate decisions prior to the final NEPA document or (2) initiate and complete as much of the process as is possible and stipulate in the NEPA document the steps that will be taken to comply with the outstanding requirements of NHPA and what steps would be taken to protect, avoid, or mitigate for the loss of any NRHP-eligible properties that are found to be located within the APE.

Option 1: Completion of Requirements Prior to Final NEPA Analysis. Under Option 1, the EA/EIS must contain the following:

- A description of the APE for cultural resources.
- Summary of information from completed historic properties inventory.
- Summary of information from completed National Register eligibility evaluations.
- Documentation of consultation with the SHPO, Indian tribes or Native Hawaiian organizations, interested parties (as appropriate), and the ACHP.
- Determination of effect under NHPA Section 106 and determination of impact significance under NEPA.
- A list of identified concerns related to historic properties.
- Documentation on any decision regarding resolution of adverse effects and comment by the ACHP. (If the ARNG makes a commitment to mitigation, the agreement document [i.e., MOA] should be attached to the EA or EIS as an appendix to provide documentation of consultation and agreement between interested parties and to evidence the legal obligation of the ARNG.)
- A description of the specific mitigation measures, if applicable, to be taken to reduce or avoid the selected action's adverse effects on historic properties.

Option 2: Delayed Completion of Requirements. Under Option 2, the EA/EIS must contain the following:

- A description of the APE for cultural resources.
- An evaluation of the existing historic properties inventory data and identification of information gaps in light of the ability of the data to meet compliance requirements for the proposed action.
- A list of references and personnel consulted to make the determination of study needs.
- Documentation of initial consultation with the SHPO, Indian tribes or Native Hawaiian organizations, interested parties (as appropriate), and the ACHP.
- Discussion of possible determination of effect under NHPA Section 106 and determination of impact significance under NEPA.
- A list of identified concerns related to historic properties.
- A statement in the ROD or FNSI that funds will not be expended until the Section 106 consultations are complete and that specific measures will be taken, as appropriate, to

reduce, avoid, or mitigate for any adverse effects the proposed action might have on historic properties.

Under Option 2, requirements to complete historic property inventory actions and Section 106 consultations will continue after completion of the NEPA document. Care should be taken to determine that all actions that must be taken to comply with Section 106 are completed before conducting project activities that might affect historic properties (e.g., earthmoving or building modification).

8.6.4 Describing the Affected Environment for Cultural Resources.

To set the stage for an adequate analysis of the subject matter, the Affected Environment section of an EA or EIS should present at least the following types of information in the order given. When appropriate, these data may be summarized in chart or tabular form.

First. Present a brief history of the study area. Much of this information can be gathered from an installation Historic Preservation Plan/Integrated Cultural Resources Management Plan or other previous cultural resources studies if they exist. Include, at a minimum, information concerning prehistory, civilian history (prior to military acquisition), and military history.

Second. Include reference to previous cultural resource inventories, investigations, standard operating procedures, agreements, and historic preservation plans. Appropriate reference/discussion in this section should include the following:

- Archeological surveys and investigations.
- Building, structure, and landscape inventories and investigations.
- Record of past NHPA compliance activities, including Programmatic Agreements, Memoranda of Agreement, and compliance letters from the SHPO.
- Historic Preservation Plans/Integrated Cultural Resource Management Plans.
- Standard Operating Procedures.

Third. Identify all listed National Historic Landmarks or National Register sites, buildings, properties, and districts (including those eligible for listing), and give their general locations. When feasible (and not considered detrimental to site protection and preservation), the locations of these properties should be displayed on maps.[28]

Fourth. If applicable, list and give locations of National Historic Landmarks or National Register properties located off ARNG property that might be affected physically, visually, or audibly by proposed ARNG activities. When feasible (and not considered detrimental to site protection and preservation), the locations of these properties should be displayed on maps.

Fifth. State whether the buildings, structures, or lands to be affected by proposed ARNG actions have been evaluated for significance under the National Register criteria. Identify any historic property that would be affected by proposed ARNG actions. If previous inventory surveys have determined that the areas that could be affected by the ARNG activities have no historic

[28] Section 304 of the NHPA requires that information about the location, character, or ownership of a historic property be withheld from public disclosure when the installation commander determines that disclosure might cause a significant invasion of privacy, risk harm to the historic property, or impede the use of a traditional religious site by practitioners.

properties, append the SHPO correspondence that concurs with the recommendations of such surveys.

Sixth. Describe and state the findings of any cultural resource investigations undertaken for proposed ARNG actions.

Seventh. If additional cultural resource investigations will be necessary before the ARNG action can proceed, the scope of these actions should be identified. Identify any MOAs/PAs that require additional cultural resource investigations, surveys, evaluations, or mitigation actions. Include copies of these agreements as appendices to the NEPA document.

8.6.5 Describing the Environmental Consequences for Cultural Resources

The Environmental Consequences section of the NEPA document should present at least the following types of information in the order given. The content and recommendations contained in the cultural resource portion of the Environmental Consequences section will be determined, in part, by whether it was possible to complete the Section 106 process (previously described in this section) before finalization of the NEPA document.

First. State whether any archeological sites or historic structures that are on or potentially eligible for the National Register would be affected by the ARNG action.

Second. If historic properties are located within the APE, determine the potential effects of the project on these properties using the criteria provided in 36 CFR 800.9(a). Effects might include, but are not limited to, the following:

- Destruction of historic buildings, structures, or landscapes.
- Construction in historic districts.
- Repair or alteration of historic buildings and structures.
- Construction in areas with archeological sites.
- Transfer of ownership to nonfederal entities.
- Decreased maintenance resulting in deterioration of historic buildings and structures.
- Change of mission training in range areas that could result in damage to surface or buried archeological sites.

Third. Determinations of effect for proposed ARNG actions should be made in consultation with the installation historic preservation officer and the SHPO. For consultation purposes, the potential for ARNG actions to affect cultural resources should be defined as either "no effect," "no adverse effect," or "adverse effect."

Fourth. Describe the actions or mitigation measures that were completed or will be necessary to bring the facility into compliance with the NHPA. Cultural resource studies undertaken as a consequence of proposed ARNG actions might include, but are not limited to, the following:

- Historic overviews to provide contexts for statements of significance.
- Archeological surveys.
- Archeological site excavations to determine National Register eligibility.

- Archeological mitigation excavations for National Register-eligible sites (final data recovery).
- Building, structure, and landscape inventories.
- Building, structure, and landscape recordation (Historic American Buildings Survey [HABS] and Historic American Engineering Record [HAER] recordings and drawings; see Volume 48, page 44731, of the *Federal Register*, published on 29 September 1983).
- Cold War property inventories.
- Selection of curation facilities for installation artifact and record collections.

8.7 Environmental Justice

The concept of environmental justice is based on the premise that no segment of the population should bear a disproportionate share of adverse human health or environmental effects. Historically, low-income and minority communities have in some cases been disproportionately affected by negative environmental effects, receiving few of the benefits of economic growth and development while absorbing much of the societal cost.

To address environmental justice concerns, in February 1994 the President issued Executive Order 12898, *Federal Actions to Address Environmental Justice in Minority and Low-Income Populations* (see Appendix KK of this manual), requiring each federal agency to "make the achievement of environmental justice part of its mission by identifying and addressing disproportionately high and adverse human health and environmental effects on minority and low-income populations." The Executive Order and an accompanying Presidential memorandum direct federal agencies to identify and analyze the potential effects of proposed actions in accordance with health and environmental laws. Public involvement and data collection efforts are also addressed to ensure that such efforts specifically consider the potential for effects from environmental hazards on minority and low-income communities.

In March 1995 DoD issued the *Department of Defense Strategy on Environmental Justice*, which describes a strategy to meet the intent of the Executive Order, minimize any adverse effects on human health and the environment of minority and low-income populations, and carry out the defense mission. Included in the document is an implementation plan that describes specific steps DoD will take to execute this strategy. A key point made in the plan is that DoD will use NEPA as the primary mechanism to implement the provisions of the Executive Order. DoD considers the plan to be a living document to allow for change as new opportunities and initiatives are identified. A copy of DoD's strategy document is provided as Appendix LL in this manual.

Environmental justice issues must be considered and addressed in the NEPA process during the identification and analysis of the potential environmental and socioeconomic effects of the proposed action and alternatives. Preparers should be sensitive to considerations of environmental justice throughout preparation of an EA or EIS. It is especially appropriate for this issue to be included in public scoping because during this early step in the NEPA process, minority and low-income populations can be identified, their participation facilitated, and their concerns determined.

Public involvement meets two requirements of the Executive Order: (1) it aids in identifying minority and low-income groups, and (2) it provides the means for these groups to participate in federal decision making that might affect them. When describing actions taken to involve the

public (scoping meetings, workshops, public meetings, media advertisements, and so forth) in the early sections of a NEPA document, specific actions taken to address environmental justice issues should be described and documented as well. A statement such as the following can document efforts made during the public involvement phase to reach minority and low-income groups.

> Persons and organizations known or thought to have a potential interest, including minority, low-income, disadvantaged, and Native American groups, were identified, informed, and given the opportunity to participate in the decision-making process.

To help ensure effective participation of environmental justice stakeholders, DoD developed a detailed checklist for agencies to use as part of their overall public participation efforts. A copy of this checklist is provided as Appendix MM in this manual.

Affected Environment. Environmental justice conditions should be addressed in the Affected Environment section of the NEPA document. For areas potentially affected by ARNG actions, this would include identifying the geographic distribution of minority populations, the geographic distribution of low-income populations by poverty status, and consumption patterns of populations that principally rely on fish and wildlife for subsistence. An appropriate introductory statement could be:

> On February 11, 1994, President Clinton issued Executive Order 12898, *Federal Actions to Address Environmental Justice in Minority and Low-Income Populations.* The purpose of the order is to avoid the disproportionate placement of adverse environmental, economic, social, or health effects from federal actions and policies on minority and low-income populations. The first step in analyzing this issue is to identify minority and low-income populations that might be affected by implementation of the proposed action or alternatives. Demographic information on ethnicity, race, and economic status is provided in this section as the baseline against which potential effects can be identified and analyzed.

Environmental Consequences. In the Environmental Consequences section of the NEPA document, effects of the proposed action and alternatives on minority and/or low-income populations in the ROI, and any appropriate mitigation, should be analyzed and documented. In conducting this analysis, it is particularly important to determine whether the ARNG's activities would have a disproportionate effect on minority or low-income populations. Examples of such effects could include increased health risks from air emissions, increased noise levels from aircraft, a reduction in employment opportunities, and adverse effects on fish and wildlife used for subsistence by local groups.

8.8 Floodplains

A floodplain is a highly variable area on one or both sides of a stream channel that is inundated by floodwater at some interval, from frequent to rare. Floodplains are an important part of any stream system and serve many natural functions, including

- Spreading out and slowing floodwaters and reducing their erosive force.
- Recharging aquifers.

- Filtering sediments out of floodwaters and providing soils for riparian vegetation, which in turn provides habitat for wildlife.

Placing structures, buildings, or debris in a floodplain or installing structures designed to protect property from floodwater (e.g., dikes, levees, retaining walls, and riprap) disturbs the natural floodplain. Impacts resulting from these disturbances include

- Increasing the size and frequency of floods.
- Decreasing the ability of the floodplain to disperse stream energy during floods, which increases peak flows and the likelihood of stream bank and bed erosion.
- Decreasing vegetation cover and wildlife habitat.
- Decreasing recharge of aquifers, which can reduce groundwater volume and affect stream baseflow.

Floodplain boundaries are most often defined and expressed in terms of frequency of inundation, that is, the 100-year and 500-year flood. The 100-year floodplain, for example, is the land inundated by the instantaneous magnitude of flow that can be expected once in 100 years based on historical records.

Many flood-prone areas partition the 100-year floodplain into two zones—the floodway and the flood fringe. The flood fringe is the outermost portion of the 100-year floodplain and consequently resides at the highest elevation. The floodway is the lower, interior zone and represents the portion of the floodplain that theoretically could convey all the 100-year floodwater with only a 1-foot rise of water level above the height of the outermost boundary of flood fringe. The importance of this distinction is that buildings in the flood fringe zone are eligible for federally subsidized flood insurance, whereas buildings in the floodway are not.

Activities can directly affect a floodplain if they occur within the floodplain boundaries. Activities occurring outside the floodplain boundaries can also affect the floodplain if they significantly disturb the timing and extent of runoff and the amount of sediment load carried by runoff. A region of influence (ROI) or boundaries for analysis of effects on floodplains typically include the sites under consideration for each alternative that reside in the 100-year floodplain, plus any activity on adjacent land in the watershed that would significantly increase surface runoff and sedimentation. Professional judgment is necessary to estimate the extent of adjacent lands that must be considered.

Statutory and Regulatory Setting. Executive Order 11988 (*Floodplain Management*) directs federal agencies to avoid to the extent possible the long- and short-term adverse impacts associated with the occupancy and modification of floodplains. State and local jurisdictions regulate impacts on the floodplain. In most instances, new construction is discouraged within the 100-year floodplain. Permits that allow structures in the floodplain typically require base floor levels to be higher than the elevation of the 100-year floodplain boundary.

Executive Order 11988 requires each federal agency to determine whether a proposed action will involve construction in a floodplain and to consider alternatives to avoid adverse effects and incompatible development. If the preferred alternative requires siting a project in a floodplain, the action must be designed or modified to minimize harm. The Executive Order requires that the public be informed of the action. For ARNG actions, this is accomplished through the public involvement provisions of NEPA, which satisfy the public review process requirements of the Executive Order. In all actions involving floodplains, proponents must ensure that their NEPA documentation specifically cites the Executive Order.

Describing Existing Conditions. The affected environment section for floodplains should accomplish the following objectives:

- It should state whether a floodplain(s) is present in the ROI for each alternative and indicate the source(s) of this information
- If a floodplain is present, the boundaries of the 100-year flood should be graphically depicted along with the source reference.
- The 100-year floodplain should be described to the extent possible using available information along with state and local regulations governing what may occur within the floodplain. This characterization may also include descriptions of the 500-year floodplain, the floodway, and flood fringe zones.

Information for flood hazard areas, including defined boundaries for 100-year floods, is found on Floodplain delineation maps produced by FEMA. If available information indicates that a floodplain is present in the ROI, a map depicting the 100-year floodplain is essential. Ideally, the map would have a 2-foot contour interval and include both the floodway and flood fringe zones. If local regulations designate zones based on the 500-year flood, this boundary should also appear on the map.

Documenting Effects of the Proposed Action and Alternatives. Assessing potential impacts on floodplains from any action requires careful consideration of a broad spectrum of possible effects and relies heavily on the specialized expertise and judgment of the assessor. The general goal is to minimize disturbance of the floodplain. The analysis should focus on the presence or absence of floodplain encroachment by the activity. General effects of having structures in the floodplain include

- Increasing the size and frequency of floods.
- Decreasing the ability of the floodplain to disperse stream energy during floods, which increases peak flows and the likelihood of stream bank and bed erosion.
- Decreasing vegetation cover and wildlife habitat.
- Decreasing recharge of aquifers, which can reduce groundwater volume and affect stream baseflow.

Actions that result in the alteration of floodwaters within an area, including those that cause excessive runoff leading to local flooding, could result in a significant impact. Mitigation measures might include avoiding construction within designated floodplains and controlling storm water runoff.

8.9 Geology and Soils

The geologic resources of an area comprise all soils and bedrock materials. Environmental aspects to be considered include stratigraphy, topography, soils and sediments, engineering properties of the materials, seismic hazards, slope stability, earthworks, mineral resources, unique landforms, and geological conditions that might limit development, influence contaminant distribution and migration, or influence ground water resources.

Soil refers to the upper layer of unconsolidated material on the surface of the earth that is capable of supporting plant life. For mapping purposes, soils are typically described as series, associations, or complexes. Soil series represent the lowest category of the U.S. system of soil taxonomy. Soil series are commonly used to name the dominant or codominant soils represented

on detailed soil maps, and they provide the most readily available detailed characterization of a soil. Soil associations and complexes consist of two or more kinds of component soils or soils and miscellaneous areas plus allowable inclusions. Components of soil associations are large enough to be delineated individually at a scale of 1:24,000, and soil complexes consist of components that are too small to be individually delineated at that scale. Soil surveys present a systematic examination, description, classification, and mapping of soils in an area. Soil surveys are classified according to the kind and intensity of field examination. The National Cooperative Soil Survey is responsible for developing and implementing standards for describing, classifying, mapping, writing, and publishing information about the soils of a specific area and for presenting this information in soil surveys. The term "prime farmland" refers to soils having characteristics that make them especially valuable for agriculture. Prime farmland, as an environmental resource relevant to NEPA analyses, is addressed separately in Section 8.15.

Many types of ARNG proposals have the potential to affect and be affected by the geologic environment and soil conditions. Major potential geologic constraints to a project include seismic activity, weak geologic structure, topography, and soil conditions. Geology has the greatest influence on design and structural engineering of new facilities. The underlying bedrock might provide an excellent foundation, or it might present enormous difficulties if excavation is desired. If the area has been mined for mineral resources or if there are caves, sinkholes, or other karstic features, the risk of ground subsidence must be determined. Project costs can vary considerably between structures that are constructed on poured footings and those which require construction on pilings due to poor surface or subsurface conditions. Topography may make construction costs prohibitive because of uneven terrain or steep slopes. If an area is seismically active, site-specific studies to establish seismic risk at new building locations would be required before construction, and the buildings would be required to meet Seismic Zone building codes for that area.

A project's potential impacts on the geologic environment include loss of or damage to mineral resources; erosion of disturbed soils; loss of or damage to paleontologic resources; loss of or damage to agricultural resources (for instance, refer to the separate discussion of prime farmland in Section 8.15); and changes to microtopography through the leveling and grading of the surface for the construction of new buildings.

Any new construction will disturb soils through ground-breaking excavation, removal of vegetation, and leveling and grading of the surface. The exposed soil would be exposed to erosion that could lead to deposition of sediment in nearby water bodies if proper management measures are not implemented. If topsoil is removed, the ground should be covered or stabilized with vegetation to prevent wind and water erosion. The soil must be replaced as the top ground cover; otherwise, there will be no material to support vegetation, creating a barren surface and the potential for severe erosion.

Certain soils have characteristics that could make them unsuitable for construction. A high acidic level can lead to corrosion of underground pipes and storage tanks. Soils exhibiting high plasticity may also be unsuitable for supporting structures such as buildings, parking lots, and roads because of their high shrink/swell potential.

The construction of new buildings, roads, and parking lots also increases the amount of impervious surface in the vicinity of the project site. The effect may be an increase in storm water runoff, resulting in erosion and associated sedimentation. Increased sediment loads in runoff can affect the water quality of nearby water bodies.

Statutory and Regulatory Setting. Applicable Army and other federal regulations for geologic and soil resources are listed below. Federal statutes and Executive Orders are described in Appendices HH through OO of this manual.

- AR 200-3, *Natural Resources—Land, Forest and Wildlife Management*
- Farmland Protection Policy Act (FPPA) of 1981
- Soil Conservation and Domestic Allotment Act
- Executive Order 11207 (*Coordination of Federal Programs Affecting Agricultural and Rural Area Development*)

Other applicable laws and regulations may include the following:

- Building codes that set the minimum standards that vary with the type of structure, its size, shape, and intended use
- Federal and state laws protecting mineral rights
- State and local laws regarding protection of geologic resources (considered on a case-by-case basis)
- Applicable state storm water management and erosion regulations
- Federal and state laws protecting wetlands (hydric soils)

Describing Existing Conditions. The affected environment section should accomplish the following objectives:

- *Geology.* The section should describe the topography of the site as well as the surrounding area, creating an image of the surface relief. The preparer should address the physiographic province the installation is in, as well as the elevation, slope, and major landforms on the installation itself.

  Discuss the surficial and general geology of the ROI. Include the name, age, thickness, and slope of the layers composing the underlying structure in order of oldest to youngest, if the information is available. Describe the engineering/structural properties of the material, pointing out any weaknesses such as the presence of karstic features. If there are petroleum or mineral resources present, determine if they have ever been extracted or if there are plans to do so in the future. It is possible that development may not be economically feasible at this time, but it might become feasible in the future.

  Describe the location of faults within the ROI, if any. List the Earthquake Hazard Zone rating for the area, the date of the last recorded earthquake, the frequency and magnitude of the earthquakes (if any), and building code standards. It is important to bring out any possibility of harm to human life should an earthquake occur.

  The characterization of the geology of the area should bring out any features that might affect the establishment of new housing or the expansion of existing housing relevant to the RCI project.

- *Soils.* The section should state all of the soil mapping units that occur on the installation with a description of the soil, its limitations, and the slope. It is recommended that the mapping units be presented in a table and a map showing their locations if the list of soils is extensive or they have characteristics that would limit proposed uses. This will provide a good general characterization of soil conditions on the site and is a useful tool

in determining use and management. If a table is included, it should present the soil series name, map unit number, texture/parent material, drainage class, hydric soil classification, limitations of the soil (including the USDA's Land Use Classification System rating), and the landscape position.

Any limitations of the soil that would affect the RCI project should be discussed. These include but are not limited to erosion hazards, poor drainage conditions, hydric soil classification, shrink/swell characteristics, steep or severe slopes, and shallow to rock conditions.

If a soil is classified as hydric, there is a high probability that jurisdictional wetlands occur on the site. The presence of hydric soils is one of the three criteria (hydric soils, hydrophytic vegetation, and wetland hydrology) used to determine the presence of U.S. Army Corps of Engineers (USACE) jurisdictional wetlands. Refer to Section 8.19 for further information on wetlands.

The section should state whether any of the mapped soil units are prime farmland soils. If so, they may be protected under the FPPA (refer to Section 8.15).

If available information is so lacking that the soil characteristics cannot be described, it is recommended that an on-site investigation to determine site-specific characteristics take place.

Documenting Effects of the Proposed Action and Alternatives. Assessing the proposed project's potential impacts on geology and soils and the impacts of geology and soils on the proposed project requires consideration of a broad spectrum of possible effects and relies on the accuracy of the data and specificity relative to the project site. Having detailed, site-specific geologic and soil information for a construction project is not only recommended, but may be required by state or local regulation.

Several standard sources should be consulted as an initial step in characterizing geologic and soil conditions on a site. These include the following:

- Topographic maps. The most widely used scale is the 7.5-minute quadrangles at 1:24,000, but other scales are available. Topographic maps make it possible to identify and measure the steepness of slope of mountains, hills, or dunes, as well as to identify other features such as water bodies, woodlands, and existing structures. Maps are available from the USGS.
- USGS geologic maps and generalized cross sections. Geologic maps and cross sections depict surface geology, underlying strata (by name and age), and depth to bedrock. These maps are also available from the USGS.
- State geological survey maps and publications. The geologic survey agency of each state is a source for maps and publications on geologic conditions in the state. A list of maps and publications available to order can usually be obtained by calling the Division of Mineral Resources.
- Aerial photographs. Some installations have been mapped using aerial photo-interpretation. These maps are often available as a GIS layer from the installation's environmental directorate. Aerial photographs, as well as mapping tools developed from their interpretation, often provide a good source for characterization of topography, geologic features, potential problem areas, and existing structures on a site.

- Seismic activity information. To obtain information on the Earthquake Hazard Zone rating for the ROI, as well as the Seismic Zone rating for building codes, contact the state geologist at the state Geological Survey or the state Division of Mineral Resources. Other sources are the USGS and the Federal Emergency Management Agency (FEMA).
- Petroleum or mineral resources. USGS geologic maps may indicate the presence of mineral deposits. The state Division of Mineral Resources or base personnel should be consulted to determine if the resources were or are being mined, or if there are plans for future exploitation.
- Soil surveys. The USDA NRCS has published soil surveys for most of the counties in the United States. If a soil survey is not available, soil characterizations may be obtainable through the local NRCS, the Soil Water Conservation District (SWCD), the local cooperative extension office, or possibly the Environmental Division for the installation.
- Hydric soils list. Lists of hydric soils are also available from the NRCS and should be requested when obtaining the soil survey book. Compare the lists to the soils mapped for the project site. Hydric soils are an indicator that wetlands may be present.
- Soil boring surveys. These surveys may have been done by the installation for a previous study. They may provide information on the soil characteristics on the site, as well as the underlying strata, and may provide the depth to bedrock.

Most of the sources of geologic and soils information listed above give a generalization of site conditions due to scale and mapping techniques. Because of this, these resources may not provide the site-specific information necessary for projects involving construction. A geotechnical evaluation of site-specific conditions and a soil characterization should be conducted prior to implementation of the project. Depending on the proposed project, this information may be necessary prior to completion of the EA.

Preparers should also consult with natural resource management or environmental division staff at the installation. They may already have the necessary maps, photographs, and copies of previous studies done at the site that may provide needed information. Previous studies include environmental assessments, environmental impact statements, remedial investigation/feasibility studies, and cultural resource surveys. Verify this information whenever possible with NRCS soil surveys and USGS and state geological survey sources.

For each alternative, the environmental consequences section for geology and soils should accomplish the following objectives:

- Indicate areas where subsurface geology is not suitable for a foundation for buildings, parking lots, and other structures due to possible subsidence, seismic activity, or high shrink/swell potential.
- If the area is seismically active, indicate the Seismic Zone building code rating that would need to be met to reduce the potential for harm to human life.
- Indicate areas where soils would be disturbed, especially areas with severe erosion potential, and what management measures would be applied to control or reduce erosion.

Effects can be divided into two types—effects of the project on the geology of the site, and effects of the geology of the site on the project. Effects of the proposed project on geology and soils could include the following:

- Erosion. Any construction activity that alters the microtopography through gradation, leveling, and excavation leaves the soil exposed and subject to wind and water erosion by removing vegetative cover. An increase in suspended dust due to trucks and other construction vehicles driving over the exposed ground surface also can be expected.
- Sediment deposition. Soil disturbance can contribute to sedimentation in adjacent water bodies through erosion and dust suspension. Sedimentation can smother vegetation, alter the flow of water, and ultimately decrease water quality.
- Increase in impervious surfaces. Construction of new buildings and the parking lots and roads that service them increases the acreage of impervious surfaces. This leads to increased storm water runoff and may affect water quality.
- Loss of mineral resources. Building of new housing units over mineral deposits would result in the loss of access to those resources, and therefore a possible economic loss to the ROI.

Effects of geology and soils on the proposed project could include:

- Subsidence. Ground subsidence due to caves, sinkholes, and other karstic features or underground mines could result in severe structural damage.
- Seismic activity. Earthquake activity could result in structural damage and harm to human life.
- Shrink/Swell. Soils with a high shrink/swell potential could result in damage to the foundation of buildings, as well as to roads and parking lots.

If a proposed project were to be built in an area where the geologic or soil conditions exhibit such severe engineering limitations that significant adverse impacts to structural integrity could arise, the situation could potentially lead to the preparation of an EIS. Such limitations could include the presence of soils with a high shrink/swell potential and the potential for ground subsidence. Avoidance and mitigation measures for issues related to geology and soils include development and implementation of a sediment and erosion control plan for the project site. Under such a plan, regular maintenance would ensure continued proper functioning of best management practices (BMPs) selected for the site. In appropriate cases, a storm water management plan for the project site may be developed and implemented. Again, regular maintenance pursuant to the plan would ensure continued proper functioning of BMPs selected in support of use of the site. Examples of BMPs for project sites include silt fences to retain sediment on the site and prevent deposition in nearby water bodies; straw mulches, hay bales, and temporary vegetative cover to help prevent erosion; and a water truck to control suspended dust.

8.10 Hazardous Materials and Wastes and Toxic Substances

The terms “hazardous materials,” “hazardous wastes,” and “toxic substances” include those substances meeting specific criteria in federal statutes and regulations. Based on regulatory definitions, substances are hazardous materials prior to and during their use. After their use and when they are no longer needed, hazardous materials may become hazardous wastes. These substances have hazardous physical and chemical properties (e.g., ignitability, corrosivity, reactivity) and/or have high toxicity.

Types of materials and substances covered under this topic include PCBs, solvents, and pesticides. Other issues often addressed are Installation Restoration Program (IRP) and related actions, and aboveground and underground storage tanks (ASTs and USTs, respectively). In addition to hazardous and toxic substances, ARNG environmental analyses generally includes

other "special hazards" in this discussion to address issues related to ACM, lead-based paint (LBP), and radon.

ARNG projects often extend to construction, demolition, support activities, and facility maintenance. These activities may involve the use of hazardous materials and/or generate hazardous wastes. A wide range of activities associated with the construction, maintenance, and management of facilities may use hazardous materials, generate hazardous waste, or release toxic substances. The potential impacts to the environment as a result of these actions may be direct or indirect, depending upon the source of the material, the extent of use or contamination, or the methods used to remedy hazardous materials in or near a project site. For example, contamination levels found at existing sites may affect future land use; contamination at new facility sites may prevent construction. Existing or newly discovered contamination may require remediation that could affect routine maintenance of existing facilities or the construction of new facilities. Soil contamination, groundwater contamination, or the uptake of contaminants of concern by vegetation may directly affect biological resources. Hazardous materials, hazardous wastes, and toxic substances require their safe handling, disposal in an acceptable manner, and minimization of risks to personnel.

Statutory and Regulatory Setting. Numerous statutory and regulatory authorities address hazardous materials, hazardous wastes, and toxic substances. Federal statutes and Executive Orders are described in Appendices HH through OO of this manual. The principal statutes and Army regulations are listed below. Prior to undertaking activities potentially affecting hazardous materials and toxic substances and associated hazardous wastes, ARNG personnel should consult the full text versions of applicable regulations.

- AR 200-1, *Environmental Protection and Enhancement*
- AR 420-49, *Utility Services*
- AR 420-76, *Pest Management*
- Resource Conservation and Recovery Act (RCRA)
- Comprehensive Environmental Response, Compensation and Liability Act (CERCLA)
- Toxic Substances Control Act (TSCA)
- Community Environmental Response Facilitation Act (CERFA)
- Federal Insecticide, Fungicide and Rodenticide Act (FIFRA)
- Federal Facilities Compliance Act (FFCA)
- Hazardous Materials Transportation Act
- Pollution Prevention Act of 1990 (PPA)
- Executive Order 12088, Federal Compliance with Pollution Control Standards
- Executive Order 12856, Federal Compliance with Right-to-Know Laws and Pollution Prevention Requirements

The following provides highlights of and information on specific matters concerning hazardous materials, hazardous wastes, and toxic substances issues that may arise in ARNG NEPA practice.

- Treatment, Storage, and Disposal of Wastes. Regulations applicable to storage of hazardous and toxic materials and treatment and disposal of hazardous and toxic wastes are designed to protect human health and the environment. Three federal laws primarily influence the Army's hazardous and toxic materials and waste management and have led

to numerous regulatory compliance requirements: RCRA, which pertains to solid and hazardous waste; CERCLA, which pertains to spills and abandoned waste sites; and the TSCA, which pertains to use, storage, and disposal of hazardous chemicals. Many regulatory functions have been turned over to state agencies operating under state laws that are as stringent as or more stringent than federal laws.

The PPA established a hierarchy of actions or ordered set of preferences for addressing wastes. Under the PPA's precepts, pollution should be prevented or reduced at the source whenever feasible; pollution that cannot be prevented should be recycled in an environmentally safe manner whenever feasible; pollution that cannot be prevented or recycled should be treated in an environmentally safe manner whenever feasible; and disposal or other release into the environment should be the last resort and should be conducted in an environmentally safe manner.

The PPA represents a major departure from most other environmental legislation. It recognizes the fundamental difference between source reduction (avoiding the creation of wastes that are difficult or costly to manage) and waste management and pollution control (having to deal with a regulatory system designed to handle problem waste).

The Army's proactive adherence to the precepts of the PPA gives rise to several benefits. These include reduced risk of exposure to potentially harmful contaminants, pollutants, and hazardous substances; reduced disposal costs; reduced liability for noncompliance with regulatory provisions; and reduced risk to health and safety.

- Underground Storage Tanks (USTs). Army policy provides for the removal, repair, or replacement of damaged, leaking, or improperly functioning USTs or associated pollution prevention devices. USTs must include monitoring devices for leak detection and be fitted with cathodic protection, catch basins, and overfill warning devices. The Army developed the TANKMAN system to provide installations with an on-line or real-time management tool that provides data on USTs. The use of TANKMAN software standardizes data reporting requirements into an Army-wide master database.

- Pesticides. FIFRA requires the registration of pesticides to ensure that, when used according to label directions, they will not present unreasonable risks to human health or the environment. Other federal regulations governing pesticide use and management include 29 CFR Part 1910, *OSHA Safety and Health Standards*; 40 CFR Section 1, SubSection E, *Pesticide Programs*; 40 CFR Part 165, *Regulations for the Acceptance of Certain Pesticides and Recommended Procedures for the Disposal and Storage of Pesticide Containers*; and 40 CFR Part 171, *Certification of Pesticide Applicators*. Each state has its own set of regulations governing pesticide use, which is adhered to on Army installations. DoD sets forth pesticide management policy in DoD Directive 4150.7, *Pest Management Program*, and DoD 4160.21-M, *Defense Utilization and Disposal Manual*, Section 9, Hazardous Property Management. Army policy is provided in AR 200-1, *Environmental Protection and Enhancement*, and AR 200-5, *Pest Management*.

  Preventive actions are key to pest management at Army installations. Under Army directives, Preventive Medicine officials conduct a proactive program that includes surveying pest populations and reporting the results to the facilities engineer, conducting an installation pesticide monitoring program, obtaining timely identification of pests and information on the susceptibility of pests to pesticides, establishing health and personnel safety criteria for pesticide operations, and providing pest management certification training.

- Lead-Based Paint (LBP). Federal, state, and local regulations, both procedural and substantive, govern the management of LBP, LBP additives, and LBP hazards. Army policy is to manage LBP in place unless it presents an imminent health threat as determined by the installation medical officer or unless operational, economic, or regulatory requirements dictate its removal.

  Army policy also imposes requirements to reduce the release of lead, lead dust, or LBP into the environment from deteriorating paint surfaces, building maintenance, or other sources on Army installations or on Army-controlled property.

  Army wastes contaminated with LBP are disposed of properly. Wastes are characterized to determine whether they are classifiable under applicable regulations as hazardous, special, or solid.

  The DoD and EPA have developed *Lead-Based Paint Guidelines for Disposal of Department of Defense Residential Real Property - A Field Guide,* Interim Final, December 1999, for achieving consistency in the application of lead-based paint requirements during the return of DoD excess infrastructure to productive use. The procedures in the guide are used primarily to address the requirements of Title X, the Residential Lead-Based Paint Hazard Reduction Act, a portion of the Housing and Community Development Act of 1992. It also includes implementing regulations under TSCA Section 403 and HUD Section 1012/1013. This guide addresses housing built before 1960, and between 1960 and 1978, child-occupied facilities, and other target housing. The Army is actively complying with this new field guide.

- Asbestos. During demolition, maintenance, repair, remediation, or renewal of buildings, asbestos can be released into the air. Asbestos is a friable material; that is, crumbling or breakage of asbestos-containing materials can release asbestos fibers into the air. Asbestos fibers can be released from various building materials, such as pipe and boiler wrap and other insulating materials and acoustic ceiling tiles. National Emissions Standards for Hazardous Air Pollutants (NESHAPs) regulate the demolition and renewal of buildings with asbestos-containing material. EPA and the states have policies that address leaving asbestos in place and thus not disturbing the material if its removal and disturbance would pose a health threat.

- PCBs. The disposal of PCB compounds is regulated under TSCA, which bans the manufacture and distribution of PCBs except for PCBs used in enclosed systems. By definition, PCB equipment is that which contains 500 parts per million (ppm) PCBs or more, PCB-contaminated equipment is that which contains PCB concentrations greater than 50 ppm but less than 500 ppm, and PCB items are those that contain PCB concentrations of 5 to 49 ppm. The EPA regulates the removal and disposal of all sources of PCBs containing 50 ppm or more; the regulations are more stringent for PCB equipment than for PCB-contaminated equipment.

- Radon. The effects of exposure to radon are uncertain, primarily because it is difficult to isolate the effects on human beings of exposures to particular sources of radiation. It is now widely accepted that effects of radiation can occur at any dose, no matter how small—a theory called the linear, no-threshold hypothesis. According to this theory, there is no level of exposure below which no effect occurs. If the theory is correct, all exposure to radiation presents some health risk. The risk of lung cancer caused by exposure to radon through its inhalation is currently a topic of concern.

The Army has implemented a Radon Reduction Program to determine and control the levels of

radon exposure of military personnel and their dependents. The Army has completed testing of most of its facilities as part of this program.

Army policy provides for ongoing radon management efforts. In accordance with AR 200-1, the Army maintains and updates records of completed radon assessments and includes radon testing results with real property and housing data to notify tenants and transferees of elevated radon levels. Army policy provides that indoor radon levels in newly constructed units and units converted to housing or continuously occupied structures (such as hospitals) located in high-radon-level areas are to be tested prior to occupancy. Where elevated levels of radon are encountered, Army facilities managers are to adhere to generally accepted abatement measures.

Describing Existing Conditions. The description of hazardous materials includes all areas potentially subject to release of hazardous materials or wastes from each ARNG-related activity, including the storage, handling, and disposal of such materials. The number and locations of such areas vary according to specifics of the proposed action. In the case of previously spilled or released contaminants, the size of the area to be described would be influenced by the physical and chemical characteristics of the materials in question (e.g., volatility and solubility), the source of the materials (e.g., UST/AST, transformers, asbestos tile flooring), and the paths by which materials released might expose populations (e.g., inhalation, dermal exposure, drinking water, ingestion). It would also be influenced by site-specific factors, including wind direction and intensity, precipitation levels, surface drainage, permeability of soils, and depth to groundwater. Such factors can greatly influence the transport and dispersion of contaminants. Hazardous materials and wastes should be discussed as follows:

- *Hazardous Materials and Toxic Substances.* Discussion of this topic should include the use of hazardous materials in ARNG facilities during routine maintenance and operations. It should identify potentially hazardous materials intrinsic to operations of each facility. These may include solvents and cleaning supplies, pesticides and herbicides, paints, preservatives, pipe solder, certain roofing tars, and exterior ASTs or USTs used for heating. Hazardous materials used in ancillary or other support facilities should also be discussed, including pesticides, motor fuels and lubricants, solvents, and other chemicals. Other pertinent information may include hazardous materials used and stored in adjacent facilities, spill contingency plans currently in place, and the status and schedule for UST renovation and removal.

- *Hazardous Waste.* Discussion should address the presence of hazardous waste at and in the vicinity of the ARNG project area. This would include the location and condition of contaminated sites, the status of IRP studies and any National Priorities List sites, ongoing or future remediation and monitoring activities, and a description of RCRA permitted facilities and other hazardous waste collection/storage sites. In addition, some mention should be included as to how or where such materials are disposed of.

This section does not require detailed discussion of IRP activities if there is no demonstrated direct or indirect effect on existing or planned ARNG facilities or activities. If the IRP program or investigations discovered no actionable conditions on or near existing or planned ARNG facilities, a statement (and citation) supporting this should be included. Alternatively, if a site undergoing remediation is located within or adjacent to an ARNG facility, the studies and analyses leading to the remediation (and any subsequent monitoring) should be discussed in detail.

Depending upon the actions contained within the proposed action and alternatives, hazardous wastes (in addition to solid wastes) may be generated by demolition or renovation of facilities or

other structures. This section should present a discussion of hazardous materials thought to be present in the facilities, which under certain circumstances might become hazardous wastes. These may include asbestos flooring tiles, asbestos siding, PCB-containing electric transformers, or LBP. The discussion should include a description of the likely physical locations of hazardous materials within the structures and an estimate of the amount of material present.

Documenting Effects of the Proposed Action and Alternatives. The potential for effects resulting from the presence or management of hazardous and toxic substances within or near an ARNG project area should be addressed. Analysis should be based upon and supported by the data and discussions contained in the affected environment section. At a minimum, this section should address the following:

- Describe how current and planned IRP efforts might be affected by the proposed action and alternatives, including schedule changes and impacts on current remediation.
- Identify additional contaminated sites on the installation.
- Identify any impacts on USTs or ASTs providing support to family housing and support facilities.
- Show anticipated volumes of hazardous wastes generated pre- and post-action.
- Show anticipated volumes of hazardous wastes for disposal pre- and post-action.
- Discuss the potential impacts from intrinsic hazardous materials in housing units.
- Discuss potential sources of toxic or hazardous substances, pathways to human receptors, and resultant risks to human populations resulting from continued habitation or from demolition of family housing and support facilities.
- Identify any beneficial effects resulting from the proposed action and alternatives, including pollution prevention efforts, waste reduction, human health hazard reduction, or toxic substance stabilization.
- Identify any permits, coordination, or other regulatory requirements likely to result from the proposed action and alternatives.

The description of effects should discuss the potential direct or indirect impacts on the baseline environment that was described in the affected environment section for hazardous materials, hazardous waste, and toxic substances. The appropriate level of impact analysis for an EA is to base it on existing data and information. In some instances, analysis of hazardous materials and wastes and toxic substances may require additional field surveys or testing.

Discussion of the proposed action should focus on how the baseline at existing contaminated sites directly or indirectly affecting ARNG facilities or activities might be altered by the proposed action. In addition, text must describe any new potential hazardous waste generation or contamination arising from specific activities within the proposed action. This discussion should also describe any likely impacts on the pattern of use of hazardous materials or the addition of new hazardous materials resulting from operational changes inherent in the proposed action. Should the proposed action and alternatives require the removal of USTs or ASTs, the removal must be in compliance with the installation's UST plan, and the potential impacts of removal and disposal must be discussed. Any activity resulting from the proposed action that results in the generation of hazardous waste must be described. Whenever possible, the impacts should be quantified. As an example, assume that the proposed action involves the demolition of facilities and, therefore, may generate some asbestos- or LBP-contaminated waste. The analysis should present the estimated volume of generated waste (if survey data exist to support such estimates),

discuss how the material would be handled during demolition and transportation, and present potential mitigation resources, where appropriate.

One method to determine significance of impacts is the use of, or reference to, standards and criteria. All materials and chemicals currently recognized as presenting real or potential risks to human health and safety have levels or concentrations which, when exceeded, present some risk. Some constituent concentrations, when exceeded, violate federal or state standards or criteria, irrespective of risk. Any impact resulting from the proposed action and alternatives that results in increases to the constituent concentration from levels below to levels above the standards, criteria, or risk thresholds may be considered a significant impact. Actions could also result in significant effects if they result in substantial increases in the generation of hazardous wastes or place substantial restrictions on property use due to hazardous waste, materials, or site remediation.

Many methods are available to mitigate impacts related to hazardous materials, hazardous waste, and toxic substances. In appropriate cases, these include

- Incorporation of waste minimization and pollution prevention processes into design of new ARNG facilities.
- Levying a requirement that construction contractors prepare and implement pollution prevention plans.
- Use of emergency response and cleanup measures to respond to environmental contamination in the event of an accidental release, including implementation of spill contingency plans.
- Installation of control devices where required to control releases of refrigerants or solvents to the air.
- Storage of certain hazardous materials in areas with secondary containment to contain potential leaks.
- Minimizing usage of hazardous materials to the extent practicable by equivalent product substitution.
- Treatment or recycling of hazardous wastes onsite, wherever feasible and allowed by regulations.
- Transport of hazardous wastes to approved off-site recycling, treatment, and disposal facilities.

8.11 Health and Safety

A healthy and safe environment is one in which there is no or an optimally reduced potential for death, serious bodily injury or illness, or property damage. Health and safety addresses matters such as workers' health and safety during demolition activities and facility construction and public safety during demolition and construction activities and during subsequent operation of facilities.

The health and safety of on-site military and civilian workers are safeguarded by numerous DoD and Army regulations designed to comply with standards issued by the Occupational Safety and Health Administration (OSHA) and the EPA. These standards specify the amount and type of training required for industrial workers, the use of protective equipment and clothing, engineering controls, and maximum exposure limits for workplace stressors.

The Assistant Secretary of the Army for Installations and Environment has overall responsibility for the Army's Human Health and Safety programs. Two Army regulations govern these programs:

- AR 385-10 prescribes Department of the Army policy, responsibilities, and procedures to protect and preserve Army personnel and property against accidental loss. It provides for public safety incident to Army operations and activities and safe and healthful workplaces, procedures, and equipment. This regulation assures statutory and regulatory compliance with the Occupational Safety and Health Act of 1970 as implemented by Executive Order 12196. This regulation applies to the active Army, the Army National Guard, the Army Reserve, and Army civilian employees. During mobilization, Sections and policies contained in this regulation may be modified by the proponent.
- Army Regulation 40-5 is a consolidation of several regulations that cover the Army's preventive medicine program. It establishes the practical measures for the preservation and promotion of health and the prevention of disease and injury. This regulation implements Executive Order 12196 and DoD Instructions 6050.5, 6055.1, 6055.5, and 6055.12. This regulation applies to all facilities controlled by the Army and to all elements of the Army. This includes military personnel on active duty, Army Reserve or National Guard personnel on active duty or in drill status, Military Academy cadets, Army Reserve Officer Training Corps cadets when engaged in directed training activities, foreign national military personnel assigned to Army components, and civilian personnel and nonappropriated fund employees who are employed by the Army on a worldwide basis.

Various stressors in the environment can adversely affect human health and safety. Identification and control or elimination of these stressors can reduce risks to health and safety to acceptable levels.

- *Physical Stressors*. Physical hazards in the environment can cause disability, disease, or death. These stressors encompass a wide range of factors, such as dust, humidity, temperature, noise, and radiation. Impacts of physical stressors can also be highly dependent on season and climate. Dust can cause a fibrosis when deposited in the lungs. Some dust, such as cement dust, can be a nuisance but not directly disease-causing. Dust is associated with any activities that disturb the soil, such as industrial operations and demolition or construction of facilities. Acceptable levels of temperature, humidity, and glare are important to efficient task performance, prevention of fatigue, and general comfort. Length of exposure to extremes of temperature and humidity is critical. Mechanical vibration and noise can cause hearing loss and produce psychological and physical disturbances. Radiation includes alpha, beta, and gamma (X) rays; ultraviolet radiation; infrared microwaves; and laser radiation. Prolonged exposure to radiation can induce skin burns, elevate temperature, and cause death.
- *Behavioral Stressors*. Behavioral stressors include the effects of military activities on (1) psychological characteristics as emotion, motivation, the learning process, and general behavior and (2) psychological needs such as freedom, space, privacy, and societal acceptance. Behavioral stressors can cause mental effects ranging from direct physical damage to the brain tissue to temporary irritability. Specific agents that have been related in some way to the degradation of mental health include exposure to certain levels of lead, mercury, carbon monoxide, and some insecticides; excessive noise; inadequate housing and privacy; inadequate light and ventilation; and the lack of recreation, mental stimulation, and physical contact.

- *Psychological Stressors.* Some chemical and physical elements and situations can cause mental tension and strain. These psychological stressors are closely related to behavioral stressors. Psychological stressors can be physical in nature, such as traffic congestion, excessive noise, air pollution, or inadequate working and living facilities. They can also be emotional in nature, such as the effects of discrimination or sexual harassment. Stress is important from a health and safety viewpoint because it directly affects the quality of a person's mental and physical health, adversely affects task performance, and greatly increases the likelihood of accidents.

- *Chemical Stressors.* Several chemical substances have the potential to produce undesired or toxic health effects. Some chemicals act locally and some act systemically (requiring absorption into the blood stream). Locally acting toxicants, whether transmitted via the air or via direct contact, are often corrosive in nature and can adversely affect the skin, eyes, respiratory tract, or gastrointestinal tract. Depending on the chemical, systemically acting chemicals can enter the body in various ways, such as through the lungs, skin, or gastrointestinal tract. Chemical stressors can also be transmitted by air ; by ground water or surface water used for drinking, irrigation, or recreation; or by direct contact.

- *Endocrine Disrupters.* A relatively new but increasingly important health concern is "Endocrine Disrupters" (EDs). EDs are generally caused by synthetic chemicals (e.g., pesticides), which, when absorbed into the body, can cause hormonal disruption. Disruption of the endocrine system can occur in various ways. For example, some chemicals may mimic a natural hormone, "fooling" the body into overresponding to the hormone. Other chemicals may block the effects of a hormone in parts of the body that are sensitive to it. Still others may directly stimulate or inhibit the endocrine system, leading to overproduction or underproduction of hormones. The EPA is investing significant resources in researching which chemicals may be involved, the patterns of exposure, the mechanisms of action in humans and wildlife, and the best means for testing to predict or screen for these effects. The EPA has also banned a number of the more environmentally persistent chemicals that have raised concerns about hormonal effects (PCBs, DDT, chlordane, aldrin/dieldrin, kepone, endrin, heptachlor, toxaphene, and 2,4,5-T), and is working with the international community to limit production and use of these chemicals worldwide. Limiting the presence of endocrine disrupters should, therefore, be included in planning for facilities, systems, and equipment associated with the transforming force.

Safety and accident hazards can often be identified and reduced or eliminated. Necessary elements for an accident-prone situation or environment include the presence of the hazard itself together with the exposed (and possibly susceptible) population. The degree of exposure depends primarily on the proximity of the hazard to the population. Activities that can be hazardous include transportation, maintenance and repair activities, and the creation of highly noisy environs. Construction hazards can be considered from the standpoint of both design criteria and the hazards associated with the construction process. The proper operation, maintenance, and repair of vehicles and equipment carry important safety implications. Any facility or area of human use with a potential explosion or other rapid oxidation process creates unsafe environs for nearby populations. Extremely noisy environs can also mask verbal or mechanical warning signals, such as sirens, bells, or horns.

The substantive content of description and evaluation of health and safety issues in NEPA analysis varies widely. When appropriate, proponents should consider the types of stressors listed above and their relationship (presence or absence) to the proposed action. Significant impacts would arise when unacceptable risks to health or safety occur as a result of implementing

a proposal. In almost all cases, effective forms of mitigation would be required.

8.12 Infrastructure

Infrastructure consists of the physical systems and structures that enable a population in a specified area to function. The extent to which an area is characterized as developed urban or undeveloped rests in large part on the types and extent of infrastructure serving the area. The availability of infrastructure and its capacity to support growth are generally regarded as essential to economic growth of an area. Although there is no national consensus as to what constitutes infrastructure, the following reflect the principal elements most often associated with the term.

- Water systems. Water systems provide water for potable use, industrial applications (including fire suppression), and agricultural irrigation. Concerns related to water systems typically pertain to availability and quality of water supplies, treatment processes, distribution, and consumption rates.
- Wastewater systems. Wastewater treatment systems may treat sanitary sewer, industrial, or both kinds of wastes. Most systems are publicly owned treatment works (POTW). For regulatory purposes, there is a subcategory of federally owned treatment works (FOTW). Wastewater treatment systems consist of a system of collection piping from waste sources that conveys wastes to a central treatment site. As a very general rule, treatment works are identified as primary (mechanical treatment only), secondary (mechanical and biological treatment), or tertiary (mechanical and biological or chemical treatment). Wastewater treatment plants operate under National Pollutant Discharge Elimination System (NPDES) permits issued by the EPA or the states pursuant to the Clean Water Act. Concerns regarding wastewater systems typically pertain to the age of the system (either its collection system and infiltration/inflow problems or the treatment plant itself), the capacity of a treatment plant (usually expressed in millions of gallons per day), and a treatment plant's record of violations or NPDES permit effluent exceedances.
- Storm Water Systems. Storm water systems convey precipitation away from developed sites to appropriate receiving surface waters. For various reasons, storm water systems may employ a variety of devices to slow the movement of water. For instance, a large, sudden flow could scour a streambed and harm biological resources in that habitat. Storm water systems provide the benefit of reducing amounts of sediments and other contaminants that would otherwise flow directly into surface waters. Failure to appropriately size storm water systems to hold or delay conveyance of the largest predicted precipitation event often leads to downstream flooding and the environmental and economic damages associated with flooding. As a general rule, a higher density of development, such as that found in the cantonment areas of Army installations, requires a greater degree of storm water management because of the higher proportion of impervious surfaces in such developed areas.
- Solid Waste Management. Solid waste management is primarily concerned with the availability of landfills to support a population's residential, commercial, and industrial needs. Alternative means of waste disposal may involve waste-to-energy programs or incineration. In some localities, landfills are designed specifically for and limited to disposal of construction and demolition debris. Recycling programs for various waste categories (e.g., glass, metal, and paper) reduce reliance on landfills for disposal.
- Energy. Types of energy include electrical power, natural gas, fuel oil, and steam. ARNG installations use all of these forms of energy. Concerns regarding energy can

extend to selection of type, conservation measures, availability, costs, or consumption rates.

- Traffic and Circulation. Smooth flow of traffic and the adequacy of road networks to move people efficiently contribute materially to the quality of the human environment. Activities can cause or adversely affect traffic congestion or can occur in locations with an inadequate or only marginally adequate supporting road network. Effects of activities are often expressed in terms of projected change in automobile traffic conditions. One of the more prevalent approaches for representing such changes is described in the Transportation Research Board's *Highway Capacity Manual* (1985). This approach classifies traffic conditions using a measure known as Level of Service (LOS). In general, LOS is represented as a scale from "A" to "F." Traffic conditions associated with the letter grades on this scale are as follows: LOS A represents free flow in traffic operations, LOS B represents reasonably free flow, LOS C represents stable, LOS D represents borderline unstable, LOS E represents extremely unstable, and LOS F represents breakdown in traffic operations. Assignment of LOS ratings to segments of roadways or intersections is based on observation and studies assessing traffic count. A second prevalent approach for describing traffic is the average daily traffic (ADT). ADT is usually expressed as a numeric value that describes the average number of vehicles passing a fixed point over a 24-hour period. This measure is particularly useful when there are changes due to activities using a particular roadway or intersection. Data for ADT and LOS are not always available to describe conditions at or near the location where activities occur.
- Transportation Systems. Transportation systems are organized means of moving people and commodities. Principal transportation systems include commercial air carriers, maritime shipping, railroads, bus services, and trucking. Movement of people by privately owned vehicles on a local or regional scale is addressed under traffic and circulation. In many instances, the location and availability of transportation system hubs, terminals, routes, and operational adjuncts (e.g., controlled airspace near an airfield) can affect or be affected by activities.
- Communications Systems. These consist primarily of radio and telecommunications systems.

ARNG-proposed actions range from initiatives that might require support from infrastructure elements to proposals for creation of infrastructure. When relevant to a proposed action, the proponent should identify the elements of infrastructure that would be affected. Such elements then should be described in detail, especially with regard to their age, condition, capacity, permit requirements, and relevant operational considerations. Descriptions of infrastructure should be confined to those at the project site or those that would affect, or be affected by, the proposed action.

Analyses of impacts to infrastructure most often are reduced to a question of capacity: Is the infrastructure capable of supporting the proposed action? If it is adequate, there generally will be no impacts. Where infrastructure is inadequate, the proponent may initially find a significant impact. In this case, further inquiry may be appropriate, such as concerning the possible necessity of new capital investment. In other cases, a proponent may establish that effects to infrastructure may be temporary. This often happens where a proposal will involve a surge of personnel or traffic within a limited geographic area, imposing abnormal strain on infrastructure elements. In many instances, these types of surge issues can be adequately addressed in planning, which mitigates the impacts of the proposal.

8.13 Land Use

Land use refers to human use of the land for economic production; for residential, religious, recreational, or other purposes; and for natural resource protection. Land uses are regulated by management plans, policies, zoning ordinances, and regulations that determine the types of uses allowable. These schema also serve to protect specially designated or environmentally sensitive uses.

Land use is often interconnected with most, if not all, the other resource areas considered in a NEPA document. Its analysis is important because land use can cause or be affected by impacts on air, water, geology, soil, noise, flora and fauna, transportation, or socioeconomics. The assessment of potential effects on land use, therefore, should be as comprehensive as the particular characteristics of the project warrant.

Under AR 210-20 (*Master Planning for Army Installations*), land use planning is based on providing facilities that support an overall quality environment for military forces (trained personnel, equipment, and supplies) needed to maintain national security. In contrast with the wide variety of land use and zoning classifications typically used by local jurisdictions, Army planning relies on 12 land use classifications: airfields, maintenance, industrial, supply/storage, administration, training/ranges, unaccompanied personnel housing, family housing, community facilities, medical, outdoor recreation, and open space.

Related to land use is the issue of property ownership. Depending on the use, location, and ownership of a particular land parcel, that parcel could be subject to regulation by federal, state, or local government entities, or any combination of entities. Leasing of property, easements, and other property agreements may also limit or control how land can be used.

ARNG actions sometimes have the potential to change the land use of a site, particularly if facilities are constructed in an area where facilities did not previously exist or if new types of activities are introduced to an area. Such changes in land use can raise a number of issues and concerns, such as whether facilities or activities will be compatible with adjoining land uses on and off an installation. Specific concerns include noise and visual intrusion, exposure to health and safety hazards, increased traffic congestion, changes in property values, community cohesiveness, and protection of environmentally sensitive areas.

On-post land use and real property information can usually be obtained from installation environmental, planning, and real property staff. Off-post land use information is typically available from local and regional planning agencies and departments. Specific sources include the following:

- Installation Master Plan. The installation's Master Plan describes existing conditions on the installation and future development projects. The Master Plan is updated every several years, and it allows the Commander to prioritize installation development projects.
- Integrated Management Plans. A number of ARNG installations have developed integrated management plans for natural resources, cultural resources, and training areas. These plans are often useful for identifying specified areas requiring the kinds of protections afforded through land use controls.
- Geographic information systems (GIS). Some ARNG installations and local planning agencies have developed GIS spatial databases for a variety of planning and analysis

purposes. In some cases, these databases may have land use/land cover data layers created specifically for land use management planning.

- Site investigations. A visit to the project site is invaluable and highly recommended. A walk or drive around the property and adjacent areas provides an easy means of visually collecting data on land use, land cover, and other resource topics.
- Land use and zoning maps. Land use and zoning maps identify property parcels according to their land use and/or zoning. These maps are essential for determining inconsistencies between the a proposed project and existing or future land uses of surrounding properties.
- Topographic maps. Depending on their production date, U.S. Geological Survey (USGS) 7.5-minute topographic maps can offer valuable information on land use, land cover, and delineation of public lands.
- Aerial photographs. Aerial photographs serve as an excellent tool for identifying land use and land cover, particularly over large areas. They can usually be obtained from local aerial photographic businesses, the local planning department, and other local and state agencies.
- City/county comprehensive plan. A city or county comprehensive plan, or general plan, is a long-term development plan for the area. It typically describes land use, transportation, socioeconomics, and other factors relevant to the area's future development and economic growth. Zoning maps, land use maps, and other graphics are an essential part of the plan. They can usually be obtained from the local planning department.
- Future land use plans or programs. On post, this information can also be obtained through interviews with environmental, planning, range management, and public works staff. Off post, such information usually comes from city, county, or regional planning and transportation departments and local chambers of commerce.

Statutory and Regulatory Setting. Land uses are regulated by all levels of government through zoning restrictions; conditional use permits; and a variety of federal, state, regional, and local policies. Laws and regulations governing land use are often highly site-specific. Outside property used by the ARNG, the most immediate general-purpose governmental jurisdiction (e.g., city or county) is most likely to control land uses. In some instances, a particular project may be located within one or more special use areas where additional land use restrictions may apply, such as coastal zone management areas or floodplains.

Under the doctrine of federal supremacy, the federal government, including the Army and the ARNG, is not subject to state or local land use or zoning regulations unless specifically consented to by Congress. The federal government does take land use and zoning policies into consideration and cooperates with state and local agencies to avoid conflicts when possible. The federal government will not, however, formally apply for conditional use permits or similar land use approvals for actions related to local zoning ordinances and land use plans. On the other hand, the federal government is subject to federal and state regulations controlling environmental impacts and the management of federal lands. Specific Army and other federal laws and regulations that may apply to ARNG actions are listed below. Federal statutes and Executive Orders are described in Appendices HH through OO of this manual.

- AR 210-20, Master Planning for Army Installations
- AR 405-80, Management of Title and Granting Use of Real Property

- AR 405-90, Disposal of Real Estate
- Federal Land Policy and Management Act (FLPMA) of 1976
- Executive Order 12372, *Intergovernmental Review of Federal Programs.*

Describing Existing Conditions. The affected environment section of the proponent's NEPA document should provide a description of the types of land use and land cover found within and around the project area. It should also indicate property ownership and associated land use agreements (if any) within this same area.

The region of influence for land use is primarily based on the size and extent of the ARNG proposal. It will normally consist of the immediate project area (i.e., buildings, facilities, and land parcels directly affected by the action, including any construction or other activities that are temporary in nature), and those areas within the immediate vicinity of the project area that could be influenced by or cause influence to the ARNG action. Because of the potential for secondary or indirect land use effects to occur on or off post, some consideration may need to be given to describing an even broader area, depending on the scope of the ARNG proposal. This is particularly true when determining the potential for cumulative effects from other development plans and programs in the region.

The discussion of land use should first give an overview of the project site and installation in terms of geographic location, the general landscape of the region, and basic climatic conditions (i.e., ranges in temperature, annual precipitation, and general wind conditions). Any location or site maps presented earlier in the NEPA document, usually in Section 2.0 (proposed action), should also be referred to here.

The description of land use conditions will usually include information on existing land use at the installation (or project area), existing land use within adjacent off-post areas, and any future land development plans or programs in the area. For each of these subtopics, the following information should be described, as appropriate:

- Installation land use. This section should describe the current on-post land use(s) within and adjacent to the project area using the 12 standard land use categories defined in AR 210-20. Any areas with special use designations, such as aircraft accident potential zones or areas of unexploded ordnance (UXO) contamination should also be identified. Relevant information on number of buildings, building or facility functions, general architecture, and total square footage may be described. Any lease agreements, easements, or rights-of-way also should be included when relevant.
- Surrounding land use. This section primarily describes off-post land use areas that are part of or adjacent to the project area and within the land use region of influence. The description should include any pertinent zoning restrictions that may apply. This section may also provide a general description of regional land uses and should give the relative location and distance from surrounding communities and any key landmarks (e.g., national parks and monuments). If any major water bodies (navigable waters, harbor areas, etc.) exist in the vicinity of the installation, their relative location and use also may need to be described.
- Future development. This section should identify any long-range development plans and programs that are proposed to occur on post and within the region. Such plans may include other development projects that have been announced, Army force restructuring actions, business parks, and any other large construction projects. Of particular importance are those development plans or programs that could cause direct or indirect

impacts that are similar in nature *and* overlapping in time and place with those impacts caused by the ARNG proposal. This particular information is vital in determining cumulative effects associated with the ARNG.

Documenting Effects of the Proposed Action and Alternatives. Determining potential impacts on land use requires an assessment of the current land use within the region of influence compared to proposed changes in land use. The proposed land use must also be compared to approved uses that are specified in the installation Master Plan, other pertinent installation environmental management plans (e.g., Integrated Natural Resources Management Plan), and, if applicable, state and local land use plans and policies (e.g., county or city comprehensive plans and local zoning ordinances).[29] The objective is to identify whether there are any incompatibilities or inconsistencies with existing land uses or with adopted land use plans and policies.

To help in determining land use impacts, preparers of the NEPA document should work with installation environmental, planning, and real property staff, along with other Army and ARNG offices and directorates as necessary. When it is expected that land use impacts might occur off post, coordination and consultation with local or regional planning agencies and officials are strongly recommended, particularly when there exists potential for public opposition.

Many ARNG proposals have the potential to result in changes to existing and future land uses through their creating new facilities, increasing or decreasing facilities densities, placing use restrictions on property through leasing and easements, taking actions leading to induced growth in the local community, and causing changes in local road networks and other infrastructure. These changes in land use must be described in the consequences section and evaluated to determine the extent of change and resulting impacts. Any incompatibilities with neighboring land uses or inconsistencies with ARNG or other government land use plans and policies must be identified and explained.

The significance of impacts is based on whether the proposed action conflicts with established land uses in the area, disrupts or divides established land use configurations, represents a substantial change in existing land uses, or is inconsistent with adopted land use plans. Because these concerns can be somewhat subjective, document preparers need to exercise best professional judgment on how much of a change in land use would constitute a potential for a significant impact.

Mitigation measures for changes in land use might include moving a proposed action to a different location to avoid conflicts with adjacent land uses, obtaining a land use plan change where the proposed action is inconsistent with existing land use or zoning maps, and creating open space or other physical buffers at the periphery to reduce perceived conflicts.

8.14 Noise

The Army's Environmental Noise Management Program (ENMP), contained in Section 7 of AR 200–1, implements federal law concerning environmental noise generated by Army and ARNG activities. The goals of the ENMP are to protect the health and welfare of people on and off post affected by all Army- and ARNG-produced noise and to reduce community annoyance from environmental noise. The program seeks to achieve compliance with applicable noise regulations in a manner consistent with an installation's mission.

[29]For determining inconsistencies with coastal zone management programs, refer to Section 5.1.2 of this manual.

The ENMP requires each installation to implement environmental noise policies to identify and control noise effects. Among these policies is the requirement to make noise predictions for long-range planning purposes. A listing of current noise policies is provided in Section 7-2 of AR 200-1.

Control of noise at an installation is important for many good reasons. Among them, one that continues to arise more often concerns encroachment. Since the establishment of many installations and training sites decades ago, development in the private sector has moved closer and closer to ARNG boundaries. That is, installations and training sites that once were considered remote now are often virtually surrounded by residential and commercial development. As installations and training sites operate and produce noise, complaints from nearby neighbors can affect the abilities of the ARNG to operate and train. In preparing NEPA analyses of proposed actions, it is important to quantify noise levels (when data are available) and to describe the noise environment in qualitative terms.

Noise is generally defined as unwanted sound. It can be any sound that is undesirable because it interferes with communications or other human activities, is intense enough to damage hearing, or is otherwise annoying. In general, the military noise environment consists of three types of noise: transportation noise from aircraft and vehicle activities, high-amplitude noise from armor and artillery firing and demolition operations, and noise from firing at small arms ranges.

Noise may be intermittent or continuous, steady or impulsive. Human response to noise is extremely diverse and varies according to the type of noise source, the sensitivity and expectations of the receptor, the time of day, and the distance between the source and the receptor. The decibel (dB) is the accepted unit of measurement for noise level. The A-scale decibel (dBA) is an adjusted dB that corresponds to the range of normal human hearing.

Describing Noise Levels. The day-night level (DNL) is the primary descriptor for noise. The DNL is the time-weighted energy average sound level, over a 24-hour period, with a 10-decibel (dB) penalty added to the nighttime levels (between 2200 and 0700 hours). This nighttime adjustment accounts for the increased sensitivity to nighttime noise levels. The DNL is an accepted unit for quantifying human annoyance to general environmental noise and is used to evaluate noise levels at noise-sensitive receptor locations. The annual average DNL is used to assess noise levels for all activities.

Noise from transportation sources such as vehicles and aircraft, and from continuous sources such as generators, is assessed using the A-weighted DNL (ADNL). The ADNL significantly reduces the measured pressure level for low-frequency sounds while slightly increasing the measured pressure level for some high-frequency sounds. Impulse noise resulting from armor, artillery, and demolition activities is assessed in terms of the C-weighted DNL (CDNL). The CDNL is often used to characterize high-energy blast noise and other low-frequency sounds capable of inducing vibrations in buildings or other structures. The C-weighted scale does not significantly reduce the measured pressure level for low-frequency components of a sound. Noise from small arms ranges is currently assessed using the peak unweighted sound level. This approach will continue until other standards are approved.

Noise Zones. As part of the ENMP, noise maps are prepared. The maps delineate up to three different noise zones, which are based on the expected percentage of the population that would be

highly annoyed by environmental noise.[30] These noise zones are usually determined through mathematical modeling and computer simulations. The associated noise levels for each zone are shown in Table 8-1.

TABLE 8-1. NOISE LEVELS

Noise Zone	Population Highly Annoyed	Transportation Noise (ADNL)	Impulsive Noise (CDNL)	Small Arms Noise (unweighted)
Zone I	<15%	<65 dBA	<62 dBC	<87 dBP
Zone II	15% - 39%	65 - 75 dBA	62 - 70 dBC	87 - 104 dBP
Zone III	>39%	>75 dBA	>70 dBC	>104 dBP

Explanation: dBA = decibels, A-weighted
dBC = decibels, C-weighted
dBP = decibels, unweighted

In general, noise-sensitive land uses, such as housing, schools, and medical facilities, are compatible with the noise environment in Zone I, normally incompatible in Zone II, and incompatible in Zone III.

Supplemental Noise Assessment. Cases can occur where there is an increased public perception of noise and an adverse community reaction to increased noise even though a noise assessment for an existing situation or proposed action indicates land use compatibility. Compatibility determinations, therefore, should be supplemented by a description of the projected noise increase and potential public reaction in the following cases:

- Where the noise environment is determined by a few infrequent noises at very high levels (e.g., blasts with C-weighted sound exposure levels in excess of 110 dB)
- If single-event noise levels from the proposed action are greater than the existing levels by 10 dB or more
- In areas where the ADNL is between 60 and 65 dB and a proposed action is projected to increase the DNL by 3 dB or more
- In areas where the ADNL is above 65 dB and the proposed action is projected to increase the DNL by 1.5 dB or more.

Examples of ARNG projects where supplemental noise assessments might be needed include establishing or expanding an existing, firing range, airfield, industrial operation, or maneuver area.

Related Programs and Issues. Consideration must be given to the potential for environmental noise to adversely affect wildlife, particularly threatened and endangered species, and domestic animals. Although there are no standards to address effects on animals, such noise effects will be studied on an as-needed basis as part of the ARNG's ENMP and natural resource programs, including assessments to comply with the Endangered Species Act (ESA) and AR 200-3.

[30] Note that a 3-dB increase in noise level doubles its perceived loudness.

Vibration is an element of impulsive noise that can cause annoyance and structural damage. It must be assessed with on-site monitoring on an as-needed basis (e.g., in response to damage complaints and when there is potential for damage to historic structures).

Clear Zones and Accident Potential Zones (APZ) at Army Aviation Support Facilities represent additional components to be considered with respect to land use compatibility. Air Installation Compatible Use Zones (AICUZ) identify noise levels specifically associated with aircraft operations. Although Clear Zones and APZ are based on areas having statistically higher potential for aircraft accidents, they also represent areas that typically are subjected to higher levels of aircraft noise. Such areas should remain undeveloped for safety purposes.

8.15 Prime Farmland

The Farmland Protection Policy Act (FPPA) of 1981 protects prime or unique farmlands as defined in the Act or farmland that is determined by the appropriate state or unit of local government agency or agencies with concurrence of the Secretary to be farmland of statewide or local importance.

The purpose of the FPPA is to minimize the extent to which federal programs contribute to the unnecessary and irreversible conversion of farmland to nonagricultural uses and to ensure that federal programs are administered in a manner that, to the extent practicable, is compatible with state, local government, and private programs and policies to protect farmland. Prime farmland does not include land already in or committed to urban development or water storage. Farmland already in urban development or water storage includes all such land with a density of 30 structures per 40-acre area. Farmland already in urban development also includes lands identified as "urbanized area" on the Census Bureau map, or as urban area mapped with a tint overprint on the USGS topographical maps, or as "urban built-up" on the USDA Important Farmland maps.

The FPPA provides that none of its provisions or other requirements shall apply to "the acquisition or use of farmland for national defense purposes during a national emergency." As ARNG proposed actions typically do not occur in times of national emergency as declared by the president, they must comply with the provisions of the FPPA. ARNG actions that would convert farmland (as defined by the FPPA and its implementing regulations) to nonfarmable conditions must complete the Farmland Conversion Impact Rating Form (Form AD-1006) to determine whether the site is farmland subject to the act. A copy of the form is provided in Appendix QQ of this manual.

Describing Existing Conditions. The analysis should state whether any of the mapped soil units are prime farmland. If they are, they may be protected under the FPPA. For many analyses, particular inquiry is needed to determine prime farmland classification. In some instances, a soil series designated as a prime farmland soil will be present at the project site but, because of previous land disturbances or facilities development, the soil is no longer viable for agricultural production.

Standard sources available to inform preparers of the status of soils relative to the FPPA and its provisions include:

- Soil surveys. The Natural Resources Conservation Service (within the USDA) publishes soil surveys for most counties. If a soil survey is not available, soil characterizations may be obtainable through the local Water Resources and Soil Conservation Office, the local cooperative extension office, or possibly the Environmental Division for the installation.

- Prime farmland list. A list of prime farmland soils also is available from the Natural Resources Conservation Service and should be requested when obtaining the soil survey book. Compare the lists to the soils mapped on the installation.

Documenting Effects of the Proposed Action and Alternatives. If no prime farmland would be affected by the proposed action, a statement to such effect should be provided in the NEPA analysis. Otherwise, analysis should indicate what areas of the project site could experience a temporary or permanent loss of prime farmland, whether completion of a Farmland Conversion Impact Rating would be necessary, and, if the farmland was to be restored, when and how it would be done.

Where prime farmland areas would be affected by the proposed action or alternatives, the proponent should identify the acreage and location on a map. If the Farmland Conversion Impact Rating form (Appendix QQ in this manual) is completed, it should be included in the NEPA document as an appendix. If no prime farmland is affected, then make this statement in the NEPA document.

If the proposed action would result in an extensive loss of prime farmland acreage relative to the total amount of prime farmland in the region, a significant impact may result. Avoidance of development on prime farmland represents the best mitigation approach.

8.16 Protection of Children

Executive Order 13045, *Protection of Children from Environmental Health Risks and Safety Risks* (April 21, 1997), recognizes a growing body of scientific knowledge that demonstrates that children may suffer disproportionately from environmental health risks and safety risks. These risks arise because (1) children's bodily systems are not fully developed, (2) children eat, drink, and breathe more in proportion to their body weight, (3) their size and weight may diminish protection from standard safety features, and (4) their behavior patterns may make them more susceptible to accidents. Based on these factors, the President directed each federal agency to make it a high priority to identify and assess environmental health risks and safety risks that may disproportionately affect children. The President also directed each federal agency to ensure that its policies, programs, activities, and standards address disproportionate risks to children that result from environmental health risks or safety risks. A copy of Executive Order 13045 is presented as Appendix NN in this manual.

Children are frequently present at ARNG installations as visitors (e.g., users of recreational facilities). On such occasions, the ARNG has taken and will continue to take precautions for their safety using a number of means, including fencing, limitations on access to certain areas, and provision of adult supervision. As part of the NEPA process, disproportionate risks to children that result from environmental health risks or safety risks must be considered and addressed during the identification and analysis of the potential environmental and socioeconomic effects of the proposed action and alternatives.

8.17 Socioeconomics

8.17.1 Background

The assessment of socioeconomic effects resulting from proposed ARNG operations, maintenance, and training activities at an installation or civilian facility can be one of the more controversial issues related to ARNG actions. The economic and social well-being of a local community can be dependent upon the activities of the installation, and disruptions to the status

quo can become politically charged and emotion-laden. The objectives of the NEPA analyst assigned the task of analyzing and documenting the socioeconomic effects become twofold. First, an open and realistic assessment of the potential effects must be performed, evaluated, and documented. Second, this process should be communicated to the general public in a manner that removes or reduces the emotion and politics and focuses on actual effects and mitigation actions.

The requirement to assess socioeconomic effects in an EA or EIS has been a source of legal discussion since the passage of the NEPA. While NEPA is predominately oriented toward the biophysical environment, court decisions have supported the need for analysis of socioeconomic effects when they are accompanied by biophysical effects. In this regard, socioeconomic effects alone cannot "trigger" the need for an EIS. It is advisable, however, to assess, where appropriate, the socioeconomic effects as part of the NEPA process (EA or EIS) and to document this analysis on a par with evaluations in areas such as air and water quality and other natural resources.

The Army's Economic Impact Forecast System. Although the federal government uses a number of economic models to address different economic issues, the Army has developed on-line databases, a series of models, and other tools specifically designed to address regional economic effects and to measure the significance of these effects.

The Army, with the assistance of many academic and professional economists and regional scientists, developed the Economic Impact Forecast System (EIFS) to address the economic effects of proposed Army (and ARNG) actions in NEPA analyses and to measure their significance.[31] As a result of its designed applicability, and in the interest of uniformity, EIFS is recommended for use in ARNG NEPA analyses. The algorithms in EIFS are simple and easy to understand and have a firm, defensible basis in regional economic theory.

EIFS is implemented as an on-line system supported by the U.S. Army Construction Engineering Research Laboratory (USACERL) through the University of Illinois. The system is accessed through the Environmental Technical Information System (ETIS) and is available at all times to anyone with an approved login and password, through toll-free numbers, Telenet, and other commonly used communications. Login identifications are available through the DENIX Data Manager, USACERL, in Champaign, Illinois; phone (217) 373-6790 or fax (217) 373-7270.

The databases in EIFS are national in scope and cover the approximately 3,700 counties, parishes, and independent cities recognized as reporting units by the Department of Commerce. EIFS allows the user to "define" an economic region of influence by identifying the counties that are to be analyzed. Once the region of influence (ROI) is defined, the system aggregates the data, calculates "multipliers" and other variables used in the various models in EIFS, and prompts the user for input data.

Definition of the Region of Influence. Of the many factors used in constructing an economic impact model and in performing an economic impact analysis, one of the most controversial is the definition of the geographic ROI. For those not accustomed to regional economic analysis, justifying a particular study area can become controversial. Careful thought and judgment should always be exercised when delineating ROIs.

Most regional and urban analysts performing socioeconomic impact analysis prefer to use a

[31] C.E. Huppertz, K.M. Bloomquist, and J.M. Barbehenn, *EIFS 5.0: Economic Impact Forecast System User's Reference Manual*, U.S. Army Construction Engineering Research Laboratory, Champaign, Illinois, 1994.

functional area concept for defining study regions.[32] Regions defined in this way explicitly consider the economic linkages and spatial dimensions between the residential population and the businesses in the geographic area. In other words, commuting and trading patterns are of prime concern.

An important note should be made of the relationship between the size of the study region and the subsequently estimated effects. A larger area usually implies larger populations, greater factor endowments, richer resource deposits, and more readily available productive supplies. All these attributes make for more integrated and more diverse economic structures that, in turn, lead to larger socioeconomic effects. On the other hand, larger regions also tend to dilute the significance of socioeconomic effects, which means that the relative significance of particular effects tends to become smaller as the region gets larger.

Beyond the general guidelines for defining regions, there are a few universally accepted "rules," which are somewhat subjective. The definition of the affected region should include all of the ingredients of a self-sustaining region—local businesses, local government, and local population. The region should reflect the limits of the economic activity associated with the affected population. The following considerations should be included in the definition of an ROI:

- The residence patterns of the affected personnel determine where they are likely to spend their salaries. Records of home addresses of personnel can serve as a means to document this consideration.
- The availability of local shopping opportunities is also a factor in the ROI definition.
- The "journey-to-work" time for employees often dictates part of the regional definition. On average, a journey-to-work time of 1 hour is considered a maximum criterion (50 miles is a good rule of thumb); however, some regions in the country are characterized by longer travel times.
- Local customs and culture often dictate the boundaries of the ROI. Long versus short commuting patterns, willingness to approach the "inner city," the sense of local community, and other factors often lead to seeming inconsistencies in the region definitions.

None of the above considerations can be used exclusively to define ROIs for all socioeconomic impact studies; all these considerations should enter into the ROI definition process. This often requires input from local personnel in addition to the analysis of secondary data sources (maps, data, etc.). The rationale used in selecting the ROI for a particular analysis should be included in the EA or EIS.

Socioeconomic Setting. Once the geographic area for a proposed ARNG activity has been defined, the socioeconomic setting should be evaluated. The purpose of describing the socioeconomic environment of the region in which the installation or other affected property is located is to provide an understanding of the socioeconomic forces that have shaped the area. In addition, the socioeconomic setting provides the "frame-of-reference" necessary to determine the significance of the estimated socioeconomic effects. It is important to know, for example, whether the region has experienced growth or decline in the recent past. In addition, this information is useful in determining the economic and demographic relationships within the

[32] K.A. Fox and T.K. Kuman, The functional economic area: Delineation and implications for economic analysis and policy. In *Papers and Proceedings, Regional Science Association,* Vol. 15 (1965): 57-85.

region and in connecting the study area with the nation at large. Demographic and economic trends for the region also give a regional perspective to an impact analysis. If particular counties diverge significantly from the regional averages, it is important to show the individual differences. Comparative data are ordinarily presented for the ROI, for the state, and frequently for the nation as a whole.

Detailed population data are available generally for decennial census years, while more aggregate data are available for years between census years. Data for specific racial and ethnic groups (such as Native Americans and Hispanics) who may be affected by the proposed activities can also be shown. Employment and population data are often presented for past decennial censuses and for more recent annual observations to provide some descriptions of overall trends. The principal sources for these kinds of data are the U.S. Bureau of the Census (Census), the U.S. Bureau of Economic Analysis (BEA), and the U.S. Bureau of Labor Statistics (BLS). Due to consistency issues between EAs and EISs, these "standard" federal sources should be used for describing the socioeconomic setting rather than locally available data. These data are available in a convenient format and in an easily retrievable form within EIFS.

8.17.2 Conducting Socioeconomic Impact Analyses

After the ROI is defined and the socioeconomic setting has been described, EIFS aggregates the data, calculates "multipliers" and other variables used in the actual models, and is ready for user input data. From the EIFS menu, users select the model to be executed. Then the users are required to input those data elements that describe the ARNG operations — changes in expenditures for salaries and for local services and supplies (e.g., construction labor and materials). Once these data have been entered into the system and a model has been executed, projections of changes in the local economy are provided. These projections include the four indicator variables—potential changes in sales volume, employment, income, and population. These four indicator variables are used to measure and evaluate the significance of socioeconomic effects.

EIFS Impact Models. Economic models are an invaluable technique for conducting an important component of socioeconomic impact analysis. These tools are especially useful in determining the order and magnitude of the effects that a federal action will have on a local or regional economy. The suite of economic models can vary from the simple to the complex, each offering its interpretation of the effects of a project. As a rule, economic models are sets of mathematical equations that represent the interactions among the integral components of the regional economy. The relationships that are modeled are based on economic principles that have a long history of relative accuracy and use. Economic models can be used to compare the effects of a project using varying scenarios. EIFS currently contains five basic impact models:

- Standard EIFS Forecast Model. The Standard EIFS Forecast Model evaluates the socioeconomic effects due to the usual operation and maintenance activities at a military installation or civilian facility or due to a change in its mission.
- Construction EIFS Forecast Model. The Construction EIFS Forecast Model evaluates the socioeconomic effects due to a construction project. The construction project is assumed to be carried out by a construction firm, so that neither the civilian nor the military personnel on post are involved in the construction activity.
- Training EIFS Forecast Model. The Training EIFS Forecast Model evaluates the socioeconomic effects due to training activities at an installation.

- Automated Input-Output Multiplier System. The Automated Input-Output Multiplier System generates input-output multipliers for impact analysis situations that reflect the unique character of specific industrial sectors.
- Small Area Assessment Model. The Small Area Assessment Model assesses the disaggregated local area income and employment effects associated with military activities.

The basis of the EIFS analytical capabilities is the calculation of multipliers that are used to estimate the effects resulting from ARNG-related changes in local expenditures and/or employment. In calculating the multipliers, EIFS uses the economic base model approach, which relies on the ratio of total economic activity to "basic" economic activity. Basic, in this context, is defined as the production or employment engaged to supply goods and services outside the ROI or by federal activities (such as military installations and their employees). According to economic base theory, the ratio of total income to basic income is measurable and sufficiently stable so that future changes in economic activity can be forecast. This technique is especially appropriate for estimating "aggregate" effects, and it makes the economic base model ideal for NEPA analyses.

Different impact scenarios create uniquely different economic and social effects in the communities surrounding a military installation. The differences in these socioeconomic effects are primarily due to the differences in the expenditure patterns of procurement and consumption of locally produced goods and services.

Data Requirements. The information required from EIFS users includes those data necessary to describe the ARNG activities. Specifically, users of EIFS must provide (1) number of civilians affected and their average annual salary, (2) number of military personnel affected and their average annual salary, (3) percentage of military personnel living on post (if applicable), and (4) total local procurement made by the affected ARNG activity. The salary data are necessary to describe the total salary inputs to the local region that are affected. Salary is defined as gross income (which is pay before deductions for income taxes, withholding, and social security tax, but does not include retirement and other benefits that are not received directly by the employee). The dollar value of local procurement is the total annual change in expenditures for two categories: (1) goods and services and (2) construction labor plus construction materials and supplies. Goods and services expenditures are used in the Standard and Training EIFS Forecast Models; construction expenditures are used in the Construction EIFS Forecast Model.

These data, necessary for the description of the proposed ARNG activity and for a full and proper socioeconomic impact analysis, should come from those sources who can identify (1) the distributions of military and civilian personnel grades in affected units and (2) local procurement made by the affected units. These data are usually available through personnel and procurement channels at the installation at which the units reside.

Model Results. Once the necessary data are entered into EIFS, a projection of the changes in the local economy is provided. Changes in ARNG operations, maintenance, and training activities can lead to changes in the demand for goods and services either from military and civilian personnel spending their incomes to support their families or from purchases to carry out activities on and off the installation. Changes in salaries and procurement are converted into an initial change in local sales (called direct project effects). In turn, direct project effects lead to further changes in local sales through a process of spending and respending (called indirect project effects). This process in total is called the "multiplier process" and is summarized in the form of an "impact multiplier." The multiplier is interpreted as the total effect on the economy of

the region resulting from a unit change in its basic sector; for example, a dollar increase in local expenditures due to expansion of a military installation.[33] Local economic and demographic changes (such as employment, income, and population) occur during the multiplier process. The EIFS model estimates and produces the following output: (1) change in total local business volume, (2) change in total local employment, (3) change in total local income, (4) change in total local population, and (5) Rational Threshold Values (RTV).

Timing of Proposed Activities. Many proposed military operation, maintenance, and training activities occur over extended periods, or their socioeconomic effects have unique temporal patterns that correspond to the various phases of the activities. That is, the indirect effects of such activities on local economies occur by different magnitudes over time, just as do the direct project effects. Thus, the socioeconomic effects should be estimated by evaluating the annual components of the effects of the proposed activities. For example, an installation proposing a 5-year plan must consider the changes in expenditures for salaries, and for local services and supplies (e.g., construction labor and materials), for the first through the fifth years of plan implementation.

Significance of Socioeconomic Effects. Once model projections are obtained, further use of EIFS tools, the RTV, and Forecast Significance of Impacts (FSI) profiles allows the user to evaluate the "significance" of the effects. These analytical tools review the historical trends for the defined region and develop measures of local historical fluctuations in sales volume, employment, income, and population. These evaluations identify the range of positive and negative changes within which a project can affect the local economy without creating a significant effect.

These techniques have two major strengths: (1) they are specific to the region under analysis, and (2) they are based on actual historical time series data for the defined region. The use of the EIFS impact models in combination with the RTV and/or FSI has proven very successful in addressing perceived socioeconomic effects.

If the socioeconomic impact analysis of the proposed activities indicates "significance," the EIFS model results should be supplemented with a more detailed analysis. Although such instances are rare, the greater detail and accuracy will be valuable in further mitigation planning. With EIFS, a higher-level input-output model is available for use. Called the Automated Input-Output Multiplier System (AIMS), the model adheres to the EIFS philosophy in ease of use, but can provide sector-specific data for further analysis of significant effects resulting from ARNG activities. In addition, more detailed, geographically specific impact analysis might be required. EIFS also contains the Small Area Assessment Model (SAAM), which provides county-by-county effects within the ROI.[34] This overall approach, referred to as the "two-tier" approach, depends on a simple, defensible model (Standard EIFS and the RTV) until such time that a significance threshold triggers a more detailed, resource-consumptive analysis of the socioeconomic effects (AIMS and SAAM).

It is rare that the significance threshold is actually crossed, and the documentation of this fact can usually lead to the dissipation of the issue. All data are locally specific and therefore applicable.

[33] EIFS estimates its multipliers using a "4-digit SIC location quotient" approach based on the concentration of industries within the region relative to the industrial concentrations for the Nation. (A.M. Isserman, The location quotient approach to estimating regional economic impact. In *Journal of American Institute of Planners*, January 1977, 33-41.)

[34] More geographically specific impact analysis is possible, but it requires greater participation from users to supply local area economic and demographic data.

Although the age of the data (dependent upon the Census source) can be criticized, the Census is the only uniform source available. The model itself is theoretically sound and has been reviewed on numerous occasions. In short, the model can be effectively used to define and document "significant/insignificant" effects.

8.18 Water Resources

8.18.1 Surface Water

The term "surface water resources" is a catchall used to describe various bodies of water residing or flowing in basins, channels, and other various natural and artificial landforms found on the earth's surface. Rivers, streams, lakes, reservoirs, ponds, and estuaries are examples of surface waters. These resources have many beneficial uses including drinking water supply, primary contact recreation (e.g., swimming), and aquatic life support.

Associated with surface water bodies are their drainage basins, or watersheds. A drainage basin is the area of land that drains water to a common outlet along a channel. The boundary of a drainage basin is called the drainage divide. Contained within the drainage basin is a hierarchal network of channels whose size increases as water moves downstream from the upper to lower end of the drainage basin. The direction, form, and pattern of this drainage is determined by topography and geologic structure.

The interaction between ground water and surface water plays an important role in determining the amount of surface water flow or levels, especially during dry conditions. Streams that flow continuously in both wet and dry times are known as perennial streams. The baseflow of these streams is dependably supplied by a continual movement of groundwater into the channel. Intermittent streams, on the other hand, flow only at certain times of the year, usually during the wet season when water tables are high enough to discharge groundwater into the channel. A third category of streams is called ephemeral streams. They do not usually have a source of groundwater seepage and therefore flow only during or immediately after periods of precipitation.

The water quality of a surface water body is determined by natural and cultural inputs of sediment, nutrients, organic materials, pathogens, metals, and other substances. Two general categories are used to describe sources of pollution—point and nonpoint. Point sources enter water bodies at an identifiable site. Examples include municipal and industrial discharges and storm sewer outfalls. Nonpoint source pollutants are typically picked up off the land and carried into surface water bodies in a diffuse manner by runoff from rainfall or snowmelt. Construction and demolition sites can be a significant source of nonpoint pollution. Grading activities remove grass, rocks, pavement, and other protective ground covers, resulting in bare, exposed soil. Wind and water erode soil and sand particles and carry them to water bodies, where they settle to the bottom. Sedimentation builds up the streambed, increases turbidity, and covers up habitat important for fish spawning and aquatic insect life. In addition, demolition and construction activities often require the use of toxic or hazardous materials such as petroleum products, pesticides, herbicides, and sealants. If allowed to migrate to water bodies as nonpoint source pollution, these materials can lower water quality and harm plant and animal life.

Abating point source pollution usually involves modifying some internal process or activity that is generating the pollutants or treating effluent before it is discharged. Nonpoint pollution is more difficult to manage. It is closely tied to uncontrollable weather events and geographic conditions. Consequently, abatement of nonpoint source pollution generally focuses on land and runoff management practices.

Acceptable or unacceptable water quality in surface waters is usually judged using water quality standards established by states or other relevant jurisdictions. Most standards assign a beneficial use(s) to a water body (i.e., a water quality classification) and then set minimum numeric and narrative criteria needed to support that use(s).

Any action involving surface disturbance in the watershed (e.g., establishment of new facilities complexes, expansion of existing complexes, or installation of new utilities serving those complexes) may have direct impacts on the hydrology or water quality of surface water. Demolition and replacement of existing ARNG facilities, even when the developed area is not expanded, could also potentially result in temporary or permanent changes in surface water conditions.

A region of influence for surface waters would typically include the sites for construction of other activities for each alternative plus adjacent lands where surface waters could be influenced by drainage patterns and point and nonpoint pollution. Professional judgment is necessary to estimate the extent of adjacent lands that must be considered.

Several standard sources may be consulted for information on surface water resources, including:

- Installation-wide surface water inventories. Information about surface water resources can be obtained from installation maps, master plans, aerial photography, and quadrangle sheets available through the USGS in digital raster format at the scale of 1:24,000 and 1:250,000.
- State water quality classifications. These are available from state water or environmental agencies.
- Water quality and hydrologic information. These are available from federal, state, and local sources.

Statutory and Regulatory Setting. The federal Clean Water Act of 1977 (33 U.S.C. 1251 et seq.) is the primary law regulating water pollution in surface waters. Other relevant laws and regulations are listed below.

- AR 200-1, Environmental Protection and Enhancement
- AR 420-49, Utility Services
- Safe Drinking Water Act (SDWA)
- Marine Protection, Research, and Sanctuaries Act
- Estuary Protection Act

Describing Existing Conditions. The affected environment section for surface water should accomplish the following objectives:

- State whether surface waters are present in the ROI for each alternative and indicate the sources(s) of information on which that decision is based.
- Graphically depict locations of surface waters and indicate the sources(s) of information used to prepare the graphic.
- Describe the types of surface water bodies and seasonal changes in water depths and flow rates to the extent possible using available information.

- Describe the drainage basins of the surface water bodies and runoff patterns within the drainage basins to the extent possible using the available information.
- Describe locations of existing sources of point and nonpoint pollution within the drainage basin to the extent possible using the available information.
- State water quality classification of surface water bodies, if appropriate.
- Summarize relevant water quality data to the extent possible using available sources when this information supports the impact analysis.
- State existing claims to water rights, if appropriate.

When surface waters are present in the region of influence, a figure depicting them should be developed. Labels should include the name of the water body and, if it is a stream or river, the direction of flow. Major drainage divides also should be included.

Description of surface water resources should include the following:

- Water bodies. The descriptions of lakes, ponds, and other bodies of standing water should normally include the area and depth of the water bodies. The description of a river or stream should include whether the stream is perennial, intermittent, or ephemeral; the direction of flow; and the name of the water body that receives its flow, if appropriate.
- Drainage basin. The drainage basin of streams should be described in terms of the direction and pattern of runoff and the main land uses found within the area that are sources of point and nonpoint pollution.
- Beneficial uses and water classification. Beneficial uses of the surface water resource should be discussed in terms of any state-designated water classification. If the beneficial use is for drinking water, major customers should be identified, along with daily average water usage, peak demands, and available capacities.
- Water quality. Relevant water quality data should be discussed and presented in a tabular format.

Documenting Effects of the Proposed Action and Alternatives. Assessing potential impacts on surface waters relies heavily on the specialized expertise and judgment of the assessor. Construction activities can produce many different kinds of nonpoint source pollutants that, if allowed to migrate into surface waters, can cause harmful consequences and lower water quality. Best management practices are used to prevent, or at least control, the pollution of runoff water that moves diffusely into surface water bodies.

The environmental consequences section for surface water resources should indicate how the condition of those resources would be affected by the proposed action and, where appropriate, propose mitigation measures and explain how those measures could be accomplished.

Typical categories of water resource impacts from ARNG activities include:

- Sedimentation. Surface disturbances can lead to increased erosion and the movement of sediment to surface waters. Sedimentation builds up the streambed, increases turbidity, and covers up habitat important for fish spawning and aquatic insect life.
- Water quality degradation. Demolition and construction activities often require the use of toxic or hazardous materials such as petroleum products, pesticides, herbicides, and

sealants. If allowed to migrate to water bodies as nonpoint source pollution, these materials can lower water quality and harm plant and animal life.

- Flooding. Surface disturbances can alter drainage patterns and render soils more impervious. These conditions can increase both the volume and intensity of runoff, which in turn increases flooding and causes erosion of stream channels and banks.

Violations of water quality standards are normally deemed significant impacts. In most cases, storm water management practices are used to mitigate the effects of construction sites (and other kinds of activities, as well) on surface water resources. While these practices vary in purpose and design, their general objectives include:

- Minimizing the amount of disturbed soil
- Preventing runoff from off-site areas from flowing across disturbed areas
- Slowing down the runoff flowing across the site
- Removing sediment from on-site runoff before it leaves the site.

Examples of practices used to meet these objective include the installation of silt fencing, sediment basins, hay bales, and gradient terraces.

8.18.2 Groundwater

Groundwater occurs in an aquifer, a water-bearing bed, or a stratum of earth, gravel, or porous stone. All aquifers have interconnected openings or pores through which water can move, but some aquifers move water better than others. In general, the best aquifers are the coarse-grained, saturated portions of the unconsolidated granular sedimentary mantle. These unconsolidated sediments are commonly found at lower elevations close to streams and consist of stream alluvium, glacial outwash or till, wind-deposited sand, alluvial fans, and similar water- or wind-induced coarse-grained granular materials.

Coarser-grained consolidated rocks such as conglomerates and sandstones are also good aquifers. They are typically found below the unconsolidated granular sedimentary mantel. Their value as aquifers depends on the degree of cementation and fracturing to which they have been subjected. Some massive sedimentary rocks such as limestone, dolomite, and gypsum can also be good aquifers. These rocks are relatively soluble, and solution along fractures can form voids that range from a fraction of an inch to several hundred feet.

Aquifers can be unconfined or confined. An unconfined aquifer is one that does not have a confining layer overlying it. It is often referred to as a free or water table aquifer. Water infiltrating into surface soils percolates downward through air-filled interstices and joins the body of groundwater. The water table, or the upper surface of the groundwater body, is in direct contact with the atmosphere through the open pores of the material above. Movement of the ground water is in direct response to gravity and is in balance with atmospheric pressure.

A confined, or artesian, aquifer has an overlying, confining layer of lower permeability than the aquifer. Therefore, it has only an indirect or distant connection to the atmosphere. Water in a confined aquifer is under pressure. When the aquifer is penetrated by an encased well, the water will rise above the bottom of the confining bed to an elevation at which it is in balance with the atmospheric pressure. If this elevation happens to be greater than that of the land surface at the well, water will flow freely (i.e., artesian well).

Recharge is the term used to describe surface water moving into bodies of groundwater. Discharge is used to describe groundwater flowing to the surface. Under natural conditions and over a long period of time, which includes both wet and dry cycles, recharge will equal discharge. Recharge sources include:

- Deep percolation from precipitation. An important source of recharge, it is influenced by vegetative cover, topography, and soil type, as well as the intensity and frequency of precipitation.
- Seepage from streams and lakes. Seepage occurs when the water table lies below the bottom. In general, the connection is strongest in streams with gravel beds in well-developed alluvial floodplains.
- Underflow from another aquifer. The amount of recharge by another aquifer depends on the head differential, the nature of the connection, and the hydraulic properties of the aquifers.
- Artificial recharge. This form of recharge can be planned (infiltration ponds and recharge wells) or unplanned (seepage from man-made canals, reservoirs, other water impounding and conveyance structures, irrigation, and septic system leach fields).

Discharge sources include:

- Seepage to streams. In certain reaches of streams during certain times groundwater may discharge into the channel and maintain baseflow.
- Flow from seeps and springs. Discharge occurs where the water table intersects the land surface or a confined aquifer outlets to the surface.
- Evaporation and transpiration. Groundwater may be lost to the atmosphere if the water table is near the surface.
- Artificial discharge. Wells and drains are designed to withdraw water from groundwater storage.
- Recharge water that is contaminated by pollution can make groundwater unsuitable or unfit for use. Sources of groundwater pollution include leachate from failing septic systems, garbage dumps, and accidental spills. The distance that pollution moves in aquifers varies. Crevassed, fissured, and cavernous rocks and coarse clean gravel tend to carry pollutants farther than finer-grained aquifers. The filtering action and adsorption in these latter aquifers tend to capture and hold pollutants.

Any action involving surface disturbance, such as the establishment of new facilities, may have direct impacts on the hydrology or water quality of groundwater. A region of influence for groundwater would typically include construction sites or other activity locations for each alternative, plus adjacent lands where recharge and discharge of groundwater occurs. Professional judgment is necessary to estimate the extent of adjacent lands that must be considered. As appropriate, legal counsel should be consulted concerning any groundwater ownership or appropriation issues.

Information on groundwater resources can be obtained from existing installation studies and maps that describe the extent and direction of groundwater flow, location of any wells, and water quality conditions of the aquifer. Water quality classifications of the groundwater can be obtained from the state water or environmental agencies.

Statutory and Regulatory Setting. The Safe Drinking Water Act (40 U.S.C. 100 et seq.) directs

EPA to develop national drinking water regulations for public water systems and directs states to establish programs that protect areas around wellheads. The 1996 amendments establish a strong emphasis on source water protection and enhanced water system management.

Describing Existing Conditions. The affected environment section for ground water should accomplish the following objectives:

- State the depth and geologic conditions of the aquifer(s) to the extent possible using available information.
- Indicate the direction of groundwater flow, location of any wells, and water quality conditions to the extent possible using available information.
- Indicate if groundwater is used by the installation or adjacent communities for drinking water. If so, note the overall yield of the aquifer. (Specific capacity and usage information for water supply purposes should be included in the Infrastructure section.)
- Describe locations of existing sources of point and nonpoint pollution that could potentially contaminate ground water recharge areas.
- Indicate existing claims to water rights.

Documenting Effects of the Proposed Action and Alternatives. Assessing potential impacts to groundwater relies heavily on the specialized expertise and judgment of the assessor. Construction activities can produce many different kinds of nonpoint source pollutants that, if allowed to migrate into groundwater, can cause harmful consequences and lower water quality. Best management practices are designed to prevent, or at least control, the pollution of runoff water.

For each alternative, the environmental consequences section for water resources should accomplish the following objectives:

- Indicate how the condition of groundwater resources would be affected.
- Propose mitigation measures and explain how those measures could be accomplished.

Typical categories of groundwater impacts from ARNG activities include

- Ground water quality degradation. Demolition and construction activities often require the use of toxic or hazardous materials such as petroleum products, pesticides, herbicides, and sealants. If allowed to migrate to groundwater, they can lower water quality.
- Decreased aquifer recharge. Surface disturbances can alter drainage patterns and render soils more impervious. These conditions can increase surface runoff at the expense of groundwater recharge. These conditions could lower the water table and alter discharge sites.

Violations of water quality standards are normally deemed significant impacts. In most cases, storm water management practices are used to mitigate the effects of construction sites (and other kinds of activities, as well) on surface water resources. While these practices vary in purpose and design, their general objectives include

- Minimizing the amount of disturbed soil.
- Preventing accidental spills of hazardous materials.
- Preventing runoff from groundwater recharge areas.

Examples of practices used to meet these objectives include careful handling of hazardous materials, marking and specialized protection of groundwater recharge areas, and the installation of runoff devices and structures such as silt fencing, sediment basins, hay bales, and gradient terraces.

8.19 Wetlands

Wetlands are defined by EPA and USACE as areas that are inundated or saturated by surface water or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Areas meeting this definition are delineated based on parameters of vegetation, soils, and hydrology. Wetlands are lands transitional between terrestrial and aquatic systems and are among the most biologically productive ecosystems in the world. These lands are of critical importance to the protection and maintenance of a large array of plants and animals, including a significant number of threatened and endangered species, by providing essential seasonal habitats. Wetlands also protect the quality of surface water by impeding the erosive forces of moving water and trapping waterborne sediment and associated pollutants, protecting regional water supplies by assisting the purification of surface water and groundwater resources, maintaining base flow to surface waters through the gradual release of stored floodwaters and groundwater, and providing a natural means of flood control and storm damage protection through the absorption and storage of water during high-runoff periods. Loss or degradation of wetlands can reduce groundwater recharge, cause increased flood levels and shoreline erosion, reduce primary productivity critical to aquatic food chains, affect water quality, and reduce habitat available to many species of terrestrial and aquatic biota. Wetlands are also valued for their aesthetic properties and often contribute to scientific and recreational opportunities.

Section 404 of the Clean Water Act (CWA) is widely accepted as the most significant federal program affecting the protection of wetlands. This program regulates both the discharge of dredged and fill material into waters of the United States and the conversion of wetlands to uplands for farming and forestry. The basic premise of the Section 404 program is that no discharge of dredged or fill material can be permitted if there is a practicable alternative that is less damaging to the aquatic environment or if the discharge would result in significant degradation to the Nation's waters and wetlands. Another federal mandate regulating wetlands is Executive Order 11990, *Protection of Wetlands*, which requires federal agencies not only to minimize the destruction of wetlands, but also to initiate action to enhance their natural values.

The CWA, through Section 401, provides means for states to control the degree of impact of discharges on state waters (including wetlands). The CWA requires that any applicant wishing to receive a federal license or permit to conduct an activity that might result in a discharge to navigable waters must obtain a Section 401 certification. Section 401 certification is granted by states, except in cases where states wish to waive the certification requirement. Although it is largely applied to chemical water quality of discharges, some states are integrating Section 401 into their overall water quality protection programs, which include protecting the physical and biological health of state waters.

It is ARNG policy to avoid adverse effects on aquatic resources and to offset those adverse effects which are unavoidable. Additionally, the ARNG strives to achieve a goal of no net loss of values and functions of existing wetlands and to permit no overall net loss of wetlands on ARNG-controlled lands.

When assessing the effect of a proposed action on a site, the proponent should investigate for the

presence of wetlands. The first step is to identify whether a wetland delineation was performed for the area in the past. If not, the proponent should inspect available background information on the area that might indicate the presence of wetlands, such as soil survey maps, aerial photographs, hydric soil lists, USGS topographical maps, and National Wetland Inventory maps. Maps alone are not reliable indicators of wetland presence because some wetlands might be too small to be recorded. Thus, a walkover of the sight should be performed by someone capable of identifying the presence of wetlands.

If the presence of a wetland is suspected in the area and the wetland is likely to be affected by the proposed action, the proponent must have the wetland boundaries delineated before undertaking any action. Delineations can be performed by certified or otherwise qualified persons who must submit their results to USACE for approval. Wetland delineation uses three criteria to identify the outer limits of a wetland area: wetland hydrology, the presence of wetland soil (hydric soil), and the presence of wetland plants (hydrophytic plants). Under USACE requirements, a site must meet all three criteria to be classified as a wetland except (1) when atypical conditions exist (e.g., areas that have been sufficiently altered by recent human activities or natural events to preclude the presence of wetland indicators) and (2) in problem areas (e.g., where seasonal changes preclude development of one of the criteria).

Statutory and Regulatory Setting. Principal authoritative sources concerning wetlands include the following:

- AR 200-3, *Natural Resources—Land, Forest and Wildlife Management*
- Clean Water Act, Sections 401 and 404
- River and Harbors Act of 1899, Section 10
- Executive Order 11990 (*Protection of Wetlands*).

States and local jurisdictions also regulate impacts to wetlands. Michigan and New Jersey have assumed administration of Section 404 from the USACE. Other states (e.g., Maryland and Pennsylvania) have instituted separate wetland permit requirements that parallel Section 404. Certain states limit formal regulation to tidally influenced wetlands (e.g., Virginia and North Carolina) or to wetlands meeting specific size or value criteria (e.g., New York, Minnesota). Certain states use different criteria to delineate regulated wetlands (e.g., Massachusetts and Connecticut). Many states use the water quality certification process to limit development activity in wetlands even if state statutes do not directly address wetlands.

Describing Existing Conditions. The affected environment section for wetlands should accomplish the following objectives:

- It should state whether wetlands are present in the region of influence for each alternative and indicate the source(s) of information used to make that decision.
- If wetlands are present, it should graphically depict their location and indicate the source(s) of information used to prepare the graphic.
- Each wetland area should be classified using the classification system developed by the USFWS (Cowardin et al., 1979), and vegetation, soils, and hydrology should be characterized.
- The functions and values of each wetland should be evaluated to the extent possible using the available information.

Wetland areas should be depicted on maps and should be labeled with their FWS classification on the figure. The text should indicate the extent of each area in acres (to one or two decimal places, depending on the precision of the available information) or, for small wetlands, in square feet. Characterization of the vegetation, soils, and hydrology for wetlands should reflect the following considerations:

- Vegetation. The description should normally indicate the dominant species for each vegetational stratum (tree canopy, saplings and shrubs, herbaceous groundcover, and woody vines). The selection of dominant species should be subjective and rarely include more than two or three species per stratum. A dominance calculation procedure sometimes used for wetland delineations (FICWD, 1989) is not recommended for purposes of vegetation description. Visible adaptations of the vegetation to wetland conditions, such as abnormally shallow roots, should be noted. The principal sources of the information will usually be a site visit or, if available, a previous wetland delineation report.
- Soils. The description should normally state which soil series are mapped in the county soil survey and provide descriptive information from the survey text on those soil series. At a minimum, the drainage properties of each soil series should be noted. If a site visit is possible, the EA preparer should take at least one or two hand-augured soil borings in each soil mapping unit (to a depth of 18 to 24 inches, as would be typical for a wetland delineation) to verify information in the county soil survey. Field indicators of hydric soils (e.g., histic epipedon, gleying, manganese concretions) should be noted.
- Hydrology. At a minimum, the hydrology description should indicate the principal water sources contributing to each wetland occurrence (e.g., surface runoff, groundwater discharge, riverine overflow, tidal flow) and whether each wetland occurrence has a surface inlet or outlet. Relevant conditions of the watershed (area contributing surface runoff) for each wetland occurrence should be noted. If a site visit is conducted, hydrological conditions contributing to an area's wetland status (e.g., depth to water table, presence of watermarks) should be noted.

Documenting Effects of the Proposed Action and Alternatives. A wetland area subject to permanent loss from fill should be precisely quantified by conducting a field delineation, survey, and mapping of all potentially effected waters of the United States, including wetlands. A qualitative consideration of the other categories of wetland related impacts is usually sufficient. Analytical models are available to generate quantitative estimates of changes in wetland hydrology and changes in wetland function.

For each alternative, the environmental consequences section for wetlands should accomplish the following objectives:

- Indicate which wetland areas would be permanently lost
- Indicate which wetland areas would be temporarily lost, and when and how those areas would be restored
- Indicate how the condition and functional integrity of other wetlands could be affected
- Propose mitigation measures, how those measures could be accomplished, and how they could offset losses of wetland area and function
- Indicate what, if any, permits would be necessary for the potential wetland impacts.

Typical categories of wetland impacts from ARNG activities could include:

- Filling. Any grading or construction activity within areas identified as wetlands constitutes filling. Filling can either be permanent, as necessary to construct a road or houses in a wetland, or temporary, as to excavate and backfill a ditch to extend a buried utility across wetlands. The EA should indicate the area to be filled and show an overlay of the construction footprint on a map of existing wetlands in a figure.
- Flooding. Construction activities adjoining wetlands can raise water levels, stressing or killing vegetation and other biota and, in extreme cases, creating open waters. Most wetland tree and shrub species are tolerant of seasonal saturation but are easily injured by extended periods of even shallow inundation. Culverts for road crossings permitted under Section 404 can become blocked (or may be improperly sized) and create impoundments that flood wetlands. Enhanced storm water flows from new impervious surfaces can also flood wetlands following heavy rainfall.
- Draining. Direct ditching of wetland areas will not likely occur as part of any RCI activity. However, construction within areas adjoining wetlands can indirectly cause portions of wetlands to dry out. For example, grade changes may divert surface flow that formerly fed wetlands in isolated depressions. In some arid areas, increased demands on shallow aquifers to support new housing and associated landscaping can cause some spring-fed wetlands to dry out. These wetlands may be located at a considerable distance from the site of construction.
- Sedimentation. Any surface soil disturbance adjacent to wetlands can contribute sediment to the wetland. This sediment can smother herbaceous vegetation and sediment-dwelling fauna and alter the movement of water through the wetland. Small, isolated wetlands experiencing heavy sedimentation may become converted to uplands.
- Water Quality Degradation. Lawn maintenance in residential areas can contribute large quantities of fertilizer and pesticides to adjoining wetlands through runoff. Fertilizer from runoff can stimulate the growth of aggressive vegetation, and small insect larvae and other biota critical to the food chain can be killed by runoff-borne pesticides.
- Increased Noise and Human Activity. The value of wetlands as wildlife habitat can be reduced by noise and other indirect effects of an increased human presence. Human activities in wetlands can trample vegetation and wildlife, compact soils, and resuspend sediments. Noise from automobiles, lawnmowers, and conversation can startle wildlife.

Note that of the categories of impacts listed above, only filling is directly subject to permitting requirements under federal law. However, all potential impacts on wetlands must be considered under NEPA, not just impacts requiring permits.

Net loss of wetland areas or functions as a result of implementation of an ARNG proposal may be deemed a significant impact. Because wetland area is more readily quantified than wetland function, and because the success of restored or created wetlands is uncertain, most mitigation proposals call for restoring or creating more wetland area than that lost. Mitigation measures for wetland impacts include the following:

- Use of detention basins, oil/water separators, and other storm water management structures to limit the effect of increased storm water on wetlands.
- Use of vegetated buffers, silt fences, straw mulches, and other erosion control practices during construction to prevent sedimentation of wetlands.
- Restoration of wetlands disturbed by the project. The long-term impact of temporary disturbances to wetlands can often be eliminated by restoring the wetlands to their

original condition. For example, trenches to install buried utilities can be backfilled with the original soil layers and replanted with indigenous wetland vegetation.

- Restoration of other wetlands. Wetland conditions can be readily restored to many former wetlands by simple measures such as filling drainage ditches, plugging or removing tile drains, or breaching open water impoundment.
- Creation of other wetlands. Some non-wetland sites can be converted into wetlands by impounding surface runoff, diverting stream flow, excavating to the water table, or other methods. Careful selection of the site and method is critical to success and cost efficiency.
- Enhancement of other wetlands. Degraded wetlands can be enhanced through removal of invasive vegetation, supplementary planting of desirable vegetation, or installation of wildlife management features such as nesting boxes.
- Purchase and protection of other wetlands. This approach is sometimes viewed as an acceptable mitigation measure if the purchased wetlands are of exceptional value and in imminent danger of development, but otherwise it is not viewed as a strong mitigation measure because most wetlands are already protected under various regulations.
- Monetary compensation. Payments can be made to trustee agencies responsible for wetland management (such as the USFWS or state game agencies).

8.20 Cumulative Effects

NEPA requires analysis of the cumulative environmental effects of a proposed action and other actions not only at the project site but also in the region, recognizing that effects on traffic congestion, air quality, noise, biological resources, socioeconomic conditions, utility system capacities, and other resources might often be manifested only at that level.

Cumulative effects are the impacts on the environment that result from the incremental impact of an action when added to other past, present, and reasonably foreseeable future actions, regardless of what agency or entity (federal or nonfederal) or person undertakes such other actions (40 CFR 1508.7). Historically, there has been little specific guidance on how to treat cumulative effects analysis in the NEPA process. The CEQ, reacting to the current state of environmental science and requests from practitioners for better guidance, has prepared a handbook entitled *Considering Cumulative Effects Under the National Environmental Policy Act* (January 1997). Incorporating some of the concepts identified in CEQ's handbook, the following discussion focuses on some of the important issues and themes that relate to cumulative effects analysis.

CEQ regulations on the scoping process (40 CFR 1508.25) make it clear that one function of scoping is to discover potential cumulative actions and effects. Connected and similar actions should be analyzed and recorded in the same document. The scoping process is one very important way to identify other prior, current, or planned actions on the installation and in the geographic area. Moreover, scoping for cumulative effects must include consideration of other federal and nonfederal actions that take place within the spatial and temporal boundaries identified.

The effects of individual minor disturbances and other changes to the environment by humans will accumulate when the frequency of disturbances is so high that the ecosystem has not fully rebounded before another stressful event is introduced. The spatial and temporal crowding of such disturbances can result in cumulative effects. Preparers of NEPA documents must obtain data on the status of significant environmental and socioeconomic resources with an

understanding of not only how the proposed action might affect these resources directly or indirectly, but also what other remote disturbances might occur as a result of the proposed action.

Scoping provides information to decision makers and helps build public confidence. Both of these factors are critical to the defensibility of NEPA analyses generally, and cumulative effects analyses specifically. In addition to using their own expertise, preparers should seek input from others during the scoping process to determine the possible spatial and temporal scope of direct, indirect, and cumulative effects. Preparers can begin to identify cumulative effects issues by pursuing answers to the following general questions:

- Is the proposed action one of several similar past, present, or future actions with similar impacts in the same geographic area?
- In what way do the activities of others in the region have environmental effects similar to those of the proposed action?
- Will the proposed action, in combination with other planning activities, affect any natural resources, cultural resources, social or economic units, ecosystems, or pollutants of regional, natural, or global public concern?
- Have any recent or ongoing NEPA analyses (or similar actions in the nation or any other actions in the region) identified important adverse or beneficial cumulative effects issues?
- Have effects been historically significant or controversial, such that the importance of a resource is defined by past loss, past gain, and investments to restore resources to adequate levels or conditions?

Preparers should also consider whether the proposed action potentially affects any of the following issues, which typically should be assessed in a cumulative manner:

- Public health and safety beyond the project site
- Air quality parameters of regional significance
- Waterborne pollutants in a regionally important water body or watershed
- Wastes that are candidates for disposition in regional, state, or federal disposal or storage facilities
- Wetlands
- Migratory populations or habitats of fish and wildlife
- Historic, cultural, or archeological resources
- Federal- and state-listed threatened and endangered species, or federally designated critical habitat.

Preparers are encouraged to pursue the assessment of cumulative effects on other resources as they may be identified for a proposed action. Methods of determining the scope of the affected environment and the type of impact analysis needed should begin to emerge during consideration of the questions and issues raised in this section.

Of the three general temporal frames of reference (past, present, and reasonably foreseeable future), determining what actions are reasonably foreseeable in the future tends to prove most difficult. One way to overcome the uncertainty related to future actions is to focus attention on resources and actions that are discussed in public planning documents; for example, by surveying state, regional, and local comprehensive plans related to urban and regional growth management

and public works. These include regional resource management plans, ecosystem management plans, and land management planning documents. Preparers should solicit public input to help determine the appropriate scope for past, present, and reasonably foreseeable future effects.

Geographic scope will be determined by the types of issues and resources with which the proponent is concerned and by the areal extent of the proposed action. Table 8-2 contains a sample listing of possible geographic area boundaries and the affected resources to which they relate.

TABLE 8-2. SAMPLE GEOGRAPHIC SCOPE

Affected Resource	Geographic Area Boundary
Air quality	Metropolitan area, airshed, global atmosphere
Water quality	Stream, river basin, estuary, or parts thereof
Vegetative resources	Watershed, forest type, ecosystem
Resident wildlife	Habitat, ecosystem
Migratory wildlife	Breeding grounds, migration route, wintering areas, or total range of affected population units
Fishery resource	Stream, river basin, estuary, or parts thereof; spawning area and migration route
Cultural resources	Boundaries of historic properties or districts, and historic or prehistoric cultural areas
Land use	Community, region, state, or county
Coastal zone	Region or state
Recreation	River, lake, geographic area, or land management unit
Socioeconomic resources	Community, metropolitan area, state, or county

A goal of the scoping process should be to obtain a list of cumulative effects issues to be addressed, a time frame and geographic boundary assigned for each resource, and a list of other actions, if possible, that contribute to each cumulative effects issue.

Describing Existing Conditions. Scoping for cumulative effects, as with direct and indirect effects, provides a context and preliminary database from which the preparer can complete an appropriate description of the affected environment. The Affected Environment section of a NEPA document should characterize the resources identified during scoping, including a summary of data relating the status and relative importance of significant natural, recreational, cultural, or economic resources. It should also integrate the resources described into an overall characterization or baseline depiction of the affected area and discuss this in relation to data that characterize past, present, or reasonably foreseeable future environmental, cultural, or economic stress factors and environmental and social trends.

In addition to baseline data, information on known cumulative effects in the project area should be included to provide a basis for subsequent analysis of the cumulative effects contribution of the proposed action and alternatives.

Documenting Effects of the Proposed Action and Alternatives. The analysis of cumulative effects should be viewed as an extension of the analysis performed to determine the significance of direct

and indirect project-specific effects. In performing cumulative effects analysis, the following steps should be taken:

- Identify the environmentally important resources to be included in the analysis of the proposed action, reasonable alternatives to the proposed action, and the no action alternative.
- Identify the important cause-and-effect relationships between the alternatives and the environmentally important resources.
- Identify the spatial and temporal boundaries of each alternative scenario.
- Identify the relevant past, present, and reasonably foreseeable future actions in the region that could cumulatively affect each scenario.
- Determine the magnitude and significance of the cumulative effects.
- Determine the magnitude and significance of the cumulative effects upon implementation of mitigation and, as appropriate, develop a strategy to eliminate, avoid, or reduce cumulative effects.

Some of the methods, techniques, and tools (in broad, general categories) that can be employed to analyze cumulative effects include, but are not limited to, the following. Consult CEQ's *Considering Cumulative Effects Under the National Environmental Policy Act* (January 1997) for further description of and guidance for using these methodologies.

- Information-gathering techniques such as surveys, interviews, and public meetings
- Checklists
- Network and system diagrams
- Trend analysis
- Map overlay techniques
- Tables
- Matrices
- Mathematical modeling and simulation
- Carrying capacity analysis
- Ecosystem analysis
- Synoptic landscape approach
- Economic effect models
- Social impact assessment
- Geographic information systems
- Remote sensing

Note that in some instances, use of these methods to address cumulative effects will require some adjustment to account for availability of data, the geographic and temporal scale of the analysis, and other uncertainties.

8.21 Mitigation Commitments

Mitigation measures are steps required for the specific purpose of reducing the significant environmental effects of implementing a proposed action or alternative. Only those mitigation measures that can be reasonably accomplished should be identified in environmental documentation (i.e., EA with FNSI, or EIS and ROD). Several mitigation approaches are listed below.

- **Avoidance.** This mitigation technique avoids effects altogether by not performing certain activities or by restricting where they may be performed.
- **Limitation of action.** This mitigation technique limits the degree or magnitude of an activity and, hence, its effects.
- **Restoration.** This technique restores or enhances existing environmental conditions. The effectiveness of and required commitment to such measures should be closely scrutinized.
- **Protection and maintenance.** This technique changes the design of the action to include engineered systems or management actions that preclude the emission of pollutants (i.e., erosion control devices, air pollution scrubbers, or oil/water separators). This technique is often a long-term, continuing procedure that can be expensive to install and maintain. As with restoration, this technique, without commitment, might not be completely effective.
- **Replacement/Compensation.** This technique attempts to replace or otherwise compensate for resources destroyed by the action. Replacement can be an expensive and controversial mitigation technique. Early commitment and timely budgeting are essential.
- **Adaptive Management Strategy.** This is a technique used by the Army and ARNG in which, during implementation, actions are modified as environmental conditions change to maintain effects within acceptable parameters. For example, this approach has been used for the Army's obscurant smoke training program, where meteorological conditions are monitored during training to determine whether changes in wind direction might cause smoke to enter endangered species habitat. If changing wind conditions were to potentially cause smoke to enter such habitat areas, modifications to the training activity would be immediately implemented to control the levels of effects.

Mitigation measures or programs must be clearly identified in a NEPA document for the decision maker to understand and approve. Such measures become ARNG commitments that must be funded and accomplished by the proponent (or another entity specifically tasked by the decision maker) within a reasonable and specified time frame. If the necessary mitigation measures will not be ready for a long period of time, this fact should be recognized in the NEPA document.

An EA can specify mitigation measures that, if implemented, would prevent significant effects that would otherwise require an EIS. In such cases, the measures should be clearly described in the EA as part of the proposed action (or preferred alternative), and also referred to or described in the FNSI. If mitigation adopted in the FNSI differs from mitigation identified in the EA, the FNSI should indicate the reasons for the variance.

For an EIS, additional mitigation measures not already incorporated into the Description of the Proposed Action and Alternatives can be discussed in the Environmental Consequences section, but for the measures to be enforceable, they must be clearly defined in the ROD as well.

Mitigation measures are enforceable only if they are adopted as part of the decision, not merely discussed in the analysis.

Implementation of a mitigation plan is the responsibility of the proponent. The proponent is also responsible for monitoring mitigation measures for completion and effectiveness. The proponent must make available to the public, upon request, the status and results of mitigation measures associated with the proposed action or preferred alternative (40 CFR 1505.3). Failure to properly implement mitigation measures can lead to litigation, with resultant project delays. AR 200-2 provides specific guidance and procedures for implementing a mitigation monitoring program.

8.22 Consultation

Agency consultation plays a pivotal role in the NEPA process. As sound analysis of the potential effects of a proposed action proceeds on an interdisciplinary approach, the expertise of agencies and parties external to the ARNG can be brought to bear through consultation. The results of consultation will illuminate and often directly affect the determination of significance of effects.

With respect to certain resources, such as protected species or cultural resources, consultation is required because another agency has, by law, jurisdiction over federal actions that may affect the resource. In other cases, consultation is advisable because of the special expertise another agency may be able to provide to a particular proposal. Examples of such consultation include issues pertaining to land use, air quality, or hazardous materials.

In undertaking their responsibilities under NEPA, proponents should understand two principles concerning agency consultation.

- *The ARNG makes the initial determination.* The proponent seeking the expertise of another agency must conduct a preliminary evaluation and arrive at an initial determination. This determination may be framed as "there would be no effects to such-and-such resource" or "such-and-such resource would not be affected and, thus, further consultation is not required." This principle applies even where another agency is prevailed upon because of its subject matter expertise. Unless the other agency has agreed to act as a coordinating agency and to conduct the primary analysis of effects to a resource, it is incumbent upon the ARNG to provide the initial description and effects analysis concerning the resource.
- *Written evidence is required.* Depending on the type of resource and requirements of the agency being asked to exercise its jurisdiction or to lend its expertise, consultation may be informal or formal. Informal consultation may occur by telephone conversation or personal meetings with the external officials.[35] Formal consultation normally occurs via written correspondence, which often is supported by separate studies or data collections. In any event, all consultation must be reduced to writing (record of telephone conversation, meeting minutes, exchange of emails, or agency correspondence). Having the written record aids in establishing defensibility of the NEPA document. It also meets

[35] In the case of consultation under the Endangered Species Act, initial written consultation is considered informal. The U.S. Fish and Wildlife Service determines whether, and at what point, "formal" consultation begins. Moreover, that agency's regulations provide that formal consultation must be with the consulting agency's (ARNG's) officials, rather than contractors or nongovernment personnel. Thus, contractors can be tasked to draft and submit informal consultation letters, but must defer to ARNG officials if and when formal consultation is needed.

the requirements of creating the administrative record (the foundation for decisions ultimately to be made).

The following discussions illustrate situations in which consultation is either required or highly appropriate and provide guidance on how to conduct such consultation.

Airspace Designation. The Federal Aviation Administration is responsible for designating special-use airspace. ARNG proposals for establishment (or elimination) of Restricted Areas, Military Operations Areas, or Controlled Firing Areas must be submitted to the FAA for action. See AR 95-2 (*Air Traffic Control, Airspace, Airfields, Flight Activities, and Navigational Aids)* for additional guidance in actions necessary to support special-use airspace proposals.

Coastal Zones. The Coastal Zone Management Act (16 USC 1451, *et seq.*) establishes goals for, and a mechanism for states to control use and development of, their coastal zones. The act requires that the ARNG ensure that its activities, within or outside the coastal zone, that affect land use, water use, or natural resources of the coastal zone are consistent to the maximum extent practicable with the enforceable policies of the federally approved state management program. Compliance with the act is shown through the ARNG preparation of a "Coastal Consistency Determination" to the state, which must concur or nonconcur within 45 days. Where a state declines to concur in the ARNG consistency determination, consultation may be appropriate or required to identify project modifications or mitigation measures,

Cultural Resources. Section 106 of the National Historic Preservation Act requires that the ARNG consult with appropriate state or tribal historic preservation officers prior to taking any action that may affect historic properties. These are defined as "Any district, building, structure, site, or object that is eligible for listing in the National Register of Historic Places because the property is significant at the national, state, or local level in American history, architecture, archeology, engineering, or culture." Under the act, the ARNG is obligated to identify and evaluate any historic properties that may be affected by an undertaking, to determine the effect of the undertaking on such properties, and to develop alternatives and measures to avoid or mitigate adverse effects.

This type of consultation is routinely accomplished through written correspondence with the appropriate historic preservation agency. In most cases, the proponent sends a letter to the historic preservation agency describing the historic properties and the proposed action, and providing rationale why the action would not have an adverse effect. Where adverse effects are predicted, meetings are often required to resolve the options available to the proponent. When agreement is reached, the historic preservation agency will provide written concurrence, enabling the action to proceed.

Essential Fish Habitat. The Magnuson-Stevens Fishery Conservation and Management Act (1996) governs conservation and management of ocean fishing and established U.S. management authority over anadromous fish and fish in the exclusion economic zone or the Continental Shelf. The ARNG must consult with the Secretary of Commerce about all activities proposed, funded, authorized, or undertaken that may affect essential fish habitat, defined as "…those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity."

Regulations issued by the National Marine Fisheries Service provide that the act

"…requires consultation for all actions that may adversely affect essential fish habitat, and it does not distinguish between actions in essential fish habitat and actions outside essential fish habitat.

Any reasonable attempt to encourage the conservation of essential fish habitat must take into account actions that occur outside essential fish habitat, such as upstream or upslope activities that may have an adverse effect on essential fish habitat. Therefore, essential fish habitat consultation with the National Marine Fisheries Service is required by federal agencies undertaking, permitting, or funding activities that may adversely affect essential fish habitat, regardless of location."

Activities identified by the National Marine Fisheries Service that may adversely affect essential fish habitat include actions such as agriculture, bank stabilization, beaver removal and habitat restoration, construction/urbanization, forestry, irrigation, wetland and floodplain alteration, woody debris removal, road building and maintenance, and habitat restoration projects.[36]

National Marine Fisheries Service regulations provide that the ARNG (or any other federal agency) is to notify the Service of an action that could adversely affect essential fish habitat. The ARNG must then inform the Service of its assessment of its proposed action's possible effects to essential fish habitat. The Service will then provide recommendations to conserve essential fish habitat. Finally, the ARNG must indicate within 30 days whether the recommendations will be implemented.

Floodplains. Actions in or near floodplains may jeopardize the natural, beneficial attributes of this resource. Proponents may consult with the Federal Emergency Management Agency to identify the locations (elevations) of the 100-year and 500-year flood zones. This type of consultation typically is informal. Where state or local regulations impose permit requirements for activities in floodplains, additional consultation may be required in conjunction with the permit application process.

Prime Farmland. Through the Farmland Protection Policy Act, Congress seeks to minimize the extent to which federal programs contribute to the unnecessary and irreversible conversion of farmland to non-agricultural uses. A proponent whose action would result in such conversion must execute Agriculture Department (AD) Form 1006 to determine potential adverse effects (direct and indirect) of activities on prime and unique farmland (as well as farmland of statewide and local importance). The form is designed in essentially two parts. The first part of AD Form 1006 requires data entry by the local office of the Natural Resources Conservation Service (formerly the Soil Conservation Service). The second part of the form requires data entry by the proponent. Depending on scores derived from the data, the proponent may find it desirable to develop additional alternatives to the proposal or mitigation measures to support the purposes of the legislation. Consultation meeting the requirements of the Farmland Protection Policy Act is achieved when the NRCS returns the executed AD Form 1006 to the proponent.

Indian Tribal Interests. Federal policy requires that agencies, including the ARNG, recognize tribal sovereignty and self-determination. In development of ARNG policies that have tribal implications, Executive Order 13175, *Consultation and Coordination with Indian Tribal Governments* (November 6, 2000) directs the federal government to contact federally recognized Indian tribes and Alaska Native entities on a government-to-government basis. The Presidential

[36] The areas to be safeguarded as essential fish habitat are determined by eight Regional Fishery Management Councils. ARNG activities within a reasonable distance of such nearshore areas are subject to the consultation requirement. It is not expected that the need for this type of consultation will often arise with respect to ARNG proposals.

Memorandum to the Heads of Executive Departments and Agencies (Subject: Government-to-Government Relations with Native American Tribal Governments), issued on April 29, 1994, requires the ARNG to assess the impact of federal government plans, projects, programs, and activities on tribal trust resources and ensure that tribal government rights and concerns are considered during the development of such plans, projects, programs, and activities. In applicable instances, the ARNG must initiate consultation with tribal governments whose interests would be affected by a proponent's proposal. The threshold determination of whether an action might affect such tribal interests rests with the proponent.

As stated in the All States Memorandum of December 6, 2000 (see Appendix G), if no Native American resources are present on the site of the proposed action, then the EA or EIS should state that the proposed action is in an area with no Native American resources. In this case, initiation of consultation would not be required. If significant resources are present but would not be affected by the proposed action, the NEPA document must provide sufficient explanation to establish that the resources would be unaffected. In both cases, formal consultation would not be required. If, however, significant resources are present and the proposed action would have a direct effect on them, formal consultation with all culturally affiliated federally recognized tribes must be conducted.

Protected Species. Under the Endangered Species Act, the U.S. Fish and Wildlife Service issues regulations for the identification of endangered and threatened species and their habitat. The ARNG must *consult* with the USFWS when its proposal may affect a listed or proposed species or critical habitat. The ARNG must *confer* with the USFWS when its proposal may jeopardize listed or proposed species or critical habitat. When the proponent's NEPA analysis shows that an action will directly or indirectly have significant impacts with respect to listed or proposed species or critical habitat, a biological assessment must be conducted, resulting in USFWS issuance of a biological opinion. The ARNG makes the initial determination whether its action may affect, may jeopardize, or may significantly affect a listed or proposed species or critical habitat.[37]

Where the proponent is not certain whether listed species or habitat occur in the area of the proposed action, initial correspondence with the USFWS may simply seek that agency's identification of species in the area. In this case, a subsequent draft or final NEPA document must be provided to the USFWS so that it may properly exercise its jurisdiction through review of the ARNG analysis. When this procedure is used, the distribution list in the EA or EIS must reflect that a copy of the document is being sent to the USFWS. Absent USFWS objection to the proponent's conclusion that the action would not affect listed or proposed species or critical habitat, the proponent may proceed.

Alternatively, where the proponent is confident in his knowledge of listed species and critical habitat in the area, the initial correspondence may describe the proposed action and provide the rationale for there being no, or minor, effects to the species or habitat. When this procedure is used, the USFWS will generally provide its concurrence, and the concurrence letter can be included in the EA or EIS. (Proponents must exercise caution: Identification of "minor effects"

[37] In cases involving protected species under the Marine Mammal Protection Act (under the purview of the National Marine Fisheries Service), the proponent's threshold determination is whether the proposed action would be reasonably likely to result in a "take" of the protected species. "Take" includes killing, capturing, or harassing. In such cases, further consultation may be required to enable the proponent to obtain from the National Marine Fisheries Service a Letter of Authorization or a Harassment Permit.

to protected species may lead to the USFWS' responding that the proposed action may jeopardize the species.)

Wetlands. Wetlands are protected by Section 404 of the Clean Water Act and Executive Order 11990, *Protection of Wetlands* (May 24, 1977). The act requires that dredge and fill activities affecting wetlands must be authorized by a permit issued by USACE. In ARNG proposals that may affect wetlands, the proponent should initiate consultation with the appropriate District Office of USACE to confirm the existence of the wetlands, to identify potential alternatives to the action, and to initiate the permit application process. Receipt of the permit is not required prior to completion of the NEPA process. Consultation should be initiated early, however, to enable adequate evaluation in the NEPA document.

Wild and Scenic Rivers. The purpose of the Wild and Scenic Rivers Act is to protect the free-flowing state of rivers that are listed in the National Wild and Scenic Rivers System. The act prohibits the ARNG from providing assistance (loan, grant, or license) for the construction of any water resources projects that would adversely affect wild and scenic rivers. "Water resources project" refers to any dam, water conduit, reservoir, powerhouse, transmission line, discharge to waters, or development project that would affect the designated river's free-flowing characteristics. For any such project, the ARNG must notify the appropriate agency (National Park Service, Bureau of Land Management, U.S. Fish and Wildlife Service, or Forest Service) at least 60 days in advance of the planned action. The administering agency will either consent to the proposal or deny it, based on whether or not the project would adversely affect the values for which the river was designated. If consent is denied, the administering agency may recommend measures to eliminated adverse effects and the proponent may submit revised plans for consideration.

Wilderness Areas. The Wilderness Act (16 USC 1131, *et seq*.) establishes a system of National Wilderness Areas and a policy for protecting and managing this system. Wilderness Areas are typically located within (and administered by) National Parks (National Park Service), National Wildlife Refuges (U.S. Fish and Wildlife Service), National Forests (Forest Service), or public lands (Bureau of Land Management). The act prohibits motorized equipment, structures, installations, roads, commercial enterprises, aircraft landings, and mechanical support in designated wilderness areas.

The ARNG must obtain the approval of the administering agency in order to proceed with a proposed action in a wilderness area. In some cases, a permit may be required. The ARNG must determine whether and how its proposed action would affect a designated area. To reach this determination, the proponent should weigh the proposed action against the prohibitions listed above. Informal consultation with the appropriate administering agency typically facilitates the initial determination. In some cases, a proponent may identify mitigation measures or qualify for and obtain an exemption from the prohibition.

9.0 DOCUMENT REVIEW, PROCESSING, AND APPROVAL

For each NEPA analysis and documentation project it undertakes, the ARNG strives to attain a thorough and legally sufficient review within a reasonable time period. This section identifies the steps associated with document review, processing, and approval for ARNG EAs and EISs. The steps assume that the proponent is the state ARNG (see Section 2.1.1 for further discussion on proponent identification). This section relies on guidance provided in the NGB's "All States" memorandum (Appendix G) and on procedures identified in AR 200-2 (Appendix F).

9.1 Steps Involved for an Environmental Assessment

For an EA originating from the state ARNG, preparation and development of the document are generally conducted at the state level by the proponent (or through document preparation support to the proponent). Final reviews, approvals, and other guidance are provided by the NGB. The following steps, which begin with review of the initial internal draft document, are typical for processing an ARNG EA. Variations in complexity and issues associated with a particular EA, however, will sometimes require changes in these steps, the participants involved, and the roles of participants. It is, therefore, important for proponents to review these steps with the Environmental Program Manager and/or the NGB-ARE early in the EA development process to ensure proper planning and coordination and to allow for adequate review time.

9.1.1 Review of the Internal Draft EA

Upon completion of the Internal Draft EA, the document is staffed with the appropriate state ARNG personnel (Legal, Public Affairs, etc.), as directed by the Adjutant General, for review and comment. Use of the ARNG's EA checklist (Appendix L) during this review will help to ensure that all the components of an EA have been addressed in the document. In addition to the internal review of the EA, initial consultations with appropriate federal, state, and local agencies are to be completed at this early stage of the EA process.

The Environmental Program Manager is the designated point of contact for facilitating the EA process at the state ARNG level and coordinating with the NGB, as necessary. Once the internal review of the EA is complete, the state ARNG revises the document, incorporating comments, and produces the Preliminary Draft EA. At this time, the state proponent is also responsible for developing draft public notices and preparing press release information in coordination with the state Public Affairs Officer (see Section 9.1.2).

9.1.2 Review and Approval of the Preliminary Draft EA

A complete Preliminary Draft EA package is provided by the state ARNG to NGB-ARE for distribution and coordination within the NGB. The required contents of this package are listed below. If any items listed are not included in the EA package to NGB, review of the EA will be delayed.

- The Preliminary Draft EA prepared in MS Word or ASCII format and on a medium (preferably compact disk) that is read and write capable.
- Draft press release (see Appendix SS for an example).
- Draft display advertisement (see Appendix TT for an example).
- Draft legal notice, if required by the state (see Appendix TT for an example).

- Signature page from the state ARNG staffing of the Internal Draft EA (see Section 9.1.1).

A Draft FNSI or Notice of Intent (NOI) is not to be included at this time, unless it is specifically required by the state and is clearly marked as a "draft." The Preliminary Draft EA package is staffed with the appropriate NGB offices. During this review, the NGB Office of Chief Counsel provides a legal sufficiency review to ensure that all legal issues of the NEPA process have been addressed. Comments on the Preliminary Draft EA are consolidated by the NGB-ARE and are provided to the state ARNG in approximately 45 days. If necessary, an In-Progress Review (IPR) meeting can be held by the appropriate state ARNG and NGB reviewers to resolve outstanding issues and concerns. The state ARNG is then responsible for incorporating NGB comments into the document and for producing the Draft EA. An errata sheet of the actions taken on each of the comments received from NGB staff is also to be prepared. This errata sheet will later be submitted to NGB as part of the Draft Final EA package (see Section 9.1.5).

9.1.3 Public Comment on the Draft EA

The state ARNG, as the proponent in this case, is responsible for publishing and distributing the Draft EA for a minimum 30-day public comment period. Requests for exceptions to this requirement should be directed to the NGB-ARE early in the EA process. When the Draft EA is distributed to the public, copies of the Draft EA and important reference documents should also be made available for public review at a facility, near the affected installation, that is open beyond normal work hours (e.g., community library).

Initiation of the public comment period and notification to the public are accomplished through publication of the display advertisement and/or the legal notice, as required, in at least one local newspaper of general circulation. Examples of such notices are provided in Appendix TT. The press release (refer to Appendix SS) should also be sent to local print and broadcast news media on or about the day on which the advertisement and legal notice are to be published. The state Public Affairs Officer is responsible for placing the notices with the local newspaper(s) and sending out the press release. This office is also the primary point of contact for any inquiries from the news media. The state Public Affairs Officer is responsible for coordinating all public notices, and other public and news media information, with the NGB Public Affairs Environmental Office prior to their release.

As the proponent, the state ARNG is responsible for receiving comments resulting from the 30-day public comment period. When substantive public comments are received, they are generally staffed with the state proponent, the Environmental Program Manager, and the state Public Affairs Officer for the purpose of generating responses. The state ARNG is then responsible for incorporating the comments and responses into the Draft EA and producing the Internal Final EA. If the EA concludes that there are no significant effects, a Preliminary Draft FNSI is also prepared at this time. If a FNSI cannot be supported, the state proponent may choose to modify or terminate the proposal or proceed to an EIS. If the state proponent chooses to proceed to an EIS, the Environmental Program Manager should contact the NGB-ARE for further guidance.

9.1.4 Review of the Internal Final EA and Preliminary Draft FNSI

Upon completion of the Internal Final EA, the EA and Preliminary Draft FNSI are staffed within the state ARNG for review and comment through a process similar to that used for the Internal Draft EA (see Section 9.1.1). If no substantive public comments are received on the Draft EA, the document can be re-identified as the Draft Final EA and sent (with the Draft FNSI) to the NGB for final review and approval (see Section 9.1.5).

9.1.5 Review and Approval of the Draft Final EA and Draft FNSI

The state ARNG is responsible for submitting a Draft Final EA package to the NGB-ARE for final review and approval. This package consists of the following:

- An errata sheet summarizing changes made to the EA based on comments provided by NGB staff (see Section 9.1.2) and public comments.
- In Portable Document Format (PDF), a compact disc containing the Draft Final EA and Draft FNSI.
- Administrative Record.
- Draft FNSI (electronic medium in MS Word); to be scanned into the final electronic copy by NGB-ARE after signature).

The NGB staffs the Draft FNSI and revises it as necessary within 15 days. Following public review of the Draft FNSI (see below), the Final FNSI will be presented for signature to the Director of Environmental Programs, who has been delegated authority to approve and execute EAs and FNSIs. Ultimately, the original signed FNSI is returned to the state ARNG, where it is to be maintained on file by the Environmental Program Manager.

9.1.6 Public Review of the Final EA and FNSI

Notice of the availability of the Final EA and Draft FNSI, and their distribution to the public for a minimum 30-day review period, are conducted by the state ARNG in the same manner as described in Section 9.1.3 for the Draft EA. Requests for a review period of less than 30 days must be directed to the NGB-ARE. This effort also requires close coordination between the state Public Affairs Officer and the NGB Public Affairs Environmental Office.

As the proponent, the state ARNG may not take any action, other than planning the proposal, until the 30-day public review period has concluded and the Final FNSI has been executed by the Deputy Director of Environmental Programs at NGB. The proponent is not required to respond to public comments on the Final EA and Draft FNSI, but it is advisable to provide some form of response (via letter, phone call, or meeting) for substantive comments made. Depending on the public's reaction to the Draft FNSI, it might be necessary to extend the review period or hold a public meeting(s). If the Draft FNSI is contested, either through legal action or substantive negative comments, the state ARNG is responsible for contacting the NGB-ARE for further guidance.

At the completion of the 30-day review period, the state ARNG is to notify NGB-ARE of any comments received on the Final EA and Draft FNSI and provide a recommendation concerning execution of the Final FNSI. Based on the comments received and state ARNG recommendation, NGB-ARE will prepare a staffing package for execution of the Final FNSI by the Deputy Director of Environmental Programs. Until they are notified that the Final FNSI has been signed, proponents may not proceed with their proposed actions.

9.2 Steps Involved for an Environmental Impact Statement

Preparation and development of an ARNG EIS are generally conducted through a close collaboration between the state ARNG and the NGB. HQDA is then responsible for final review and approval of the document. The following steps are typical for processing an ARNG EIS. Variations in complexity and issues associated with a particular EIS, however, will sometimes

require changes in these steps, the participants involved, and the roles of participants. It is, therefore, important for proponents to review these steps with the Environmental Program Manager and the NGB-ARE early in the EIS development process. This approach will ensure proper planning and coordination and will allow for adequate review time later on.

9.2.1 Project Notification and Scoping

Notice of Intent. As described in Section 7, the EIS process begins when an agency proponent determines that a proposed action might have a significant effect on the human environment and an NOI is published. The state proponent initially prepares an NOI "package" in coordination with the Environmental Program Manager, state Public Affairs Officer, NGB-ARE, and NGB Public Affairs Environmental Office. This package consists of the following:

- Draft NOI.
- Draft press release, also referred to as a Memorandum for Correspondents, or MFC.
- Draft Information for Members of Congress, or IMC.
- Draft Questions and Answers, or Q&As.
- A compact disk containing the NOI, MFC, Qs&As, and IMC in MS Word or ASCII format.

Samples of documents to be included in the NOI package (NOI, MFC, IMC, and Qs&As) are shown in Appendix UU.

Following NGB staffing and approval of the NOI package by the Deputy Director of the ARNG, the NGB submits the NOI package to the Army Staff (ARSTAF) proponent at HQDA. The ARSTAF proponent is responsible for coordinating the NOI submission within HQDA. Upon receiving approval from the Deputy Assistant Secretary of the Army for Environmental, Safety, and Occupational Health (DASA (ESOH)), the Office of the Congressional Legislative Liaison (OCLL) delivers the IMC to appropriate congressional offices. The NGB is then responsible for having the NOI published in the *Federal Register*. Upon publication of the NOI, an announcement by the Office of the Chief of Public Affairs (OPA) is made through release of the MFC, with Qs&As, to the news media. At the same time, the state Public Affairs Officer communicates the NOI, including any planned scoping meetings, through display advertisements and/or legal notices in local newspapers, similar to public notices for EAs (see Section 9.1.3).

Public Scoping Meetings. The state Public Affairs Officer, in coordination with the NGB Public Affairs Environmental Office, is responsible for any follow-on public notifications (e.g., additional newspaper advertisements and local broadcast of public announcements) and setting up facilities for scoping meetings if they are to be held. Scoping meetings are best held near the site of the proposed action in a public place like a school or town hall. Although the official scoping process does not begin until after the NOI has been published in the *Federal Register*, interagency planning and coordination should occur before NOI publication to ensure a substantive and reasonable proposal is prepared for presentation to the public during scoping meetings. Planning for and participation at scoping meetings typically involves the state proponent, Environmental Program Manager, state Public Affairs Officer, NGB-ARE, and NGB Public Affairs Environmental Office.

Agency Consultations. As part of the scoping process, initial consultations with appropriate outside agencies (federal, state, and local) are to be completed early on. Depending on project issues and expectations for outside agency involvement, these consultations might need to occur

before release of the NOI. The state proponent is responsible for coordinating all meetings and correspondence with outside agencies through the Environmental Program Manager and/or the NGB-ARE, as appropriate.

9.2.2 Review of the Internal DEIS

Upon completion of the Internal DEIS, the document is staffed with the appropriate state ARNG and NGB personnel (Legal, Public Affairs, etc.) for review and comment. During this review, the NGB Office of Chief Counsel provides a legal sufficiency review of the document to ensure that all legal issues of the NEPA process have been addressed. The Environmental Program Manager is the designated point of contact for facilitating the EIS process at the state ARNG level, and NGB-ARE is the point of contact at the NGB level. Once this review is complete, the state proponent revises the document, incorporating comments, and produces the Preliminary DEIS.

9.2.3 Review and Approval of the Preliminary DEIS

Following NGB staffing and approval of the Preliminary DEIS by the Deputy Director of the ARNG, the NGB submits 15 copies of the document (provided by the state) to HQDA for staff review. HQDA provides comments back to the state proponent within 30 to 40 days. An IPR meeting may be held by appropriate state ARNG, NGB, and HQDA offices to resolve outstanding issues and concerns. The state proponent is then responsible for incorporating HQDA's comments and producing the DEIS.

9.2.4 Public Comment on the DEIS

Notice of Availability. The state proponent initially prepares a Notice of Availability (NOA) package in coordination with the Environmental Program Manager, the state Public Affairs Officer, NGB-ARE, and the NGB Public Affairs Environmental Office. This package consists of the following:

- Draft NOA, including information on public meetings (see Appendix J for an example).
- Draft press release, also referred to as an MFC (see Appendix SS for an example).
- Draft IMC (see Appendix UU for an example).
- Draft Qs&As (see Appendix UU for an example).
- A compact disc containing the NOA, MFC, Qs&As, and IMC in MS Word or ASCII format.

Following approval by the Deputy Director of the ARNG, NGB forwards the NOA package, including copies of the DEIS (HQDA will advise on the number of copies), to HQDA for staff reviews and concurrence. Following concurrence by DASA (ESOH), the NGB is responsible for providing five copies of the DEIS to the EPA Office of Federal Activities and having the NOA published in the *Federal Register*.[38] Also at this time, the OCLL delivers the IMC to appropriate congressional offices. Upon publication of the NOA, the OPA makes an announcement through release of the MFC, with Qs&As, to the news media. At the same time, the state Public Affairs Officer communicates the document's availability, including planned public meetings, through display advertisements and legal notices in local newspapers, similar to public notices for EAs

[38] Publication of the NOA in the *Federal Register* by NGB should occur on or before the date on which EPA has its notice for the DEIS published in the *Federal Register*.

(see Section 9.1.3). The state ARNG is also responsible for mailing the signed DEIS to all recipients identified in the Distribution List section of the document (see Section 7.7), on or just before the day EPA receives its copies from NGB. Copies of the DEIS and important reference documents should also be made available for public review at a facility, near the affected installation, that is open beyond normal work hours (e.g., community library). It is important that the public receive or have access to the DEIS on or before the date on which EPA's notice for the DEIS is published in the Federal Register because the 45-day (minimum) comment period officially begins on that date.

Public Meetings. The state Public Affairs Officer, in coordination with the NGB Public Affairs Environment Office, is responsible for any follow-on public notifications (e.g., newspaper advertisements or local broadcast of public announcements) and setting up facilities for public meetings if they are to be held. Public meetings are best held near the site of the proposed action in a public place like a school or town hall. Planning for and participation at public meetings typically involves the state proponent, Environmental Program Manager, state Public Affairs Officer, NGB-ARE, and NGB Public Affairs Environmental Office. Completion of the NGB's level 6 or 10 training course in risk communication is recommended for all meeting participants.

Incorporating Public Comments. As the proponent, the state ARNG is responsible for receiving comments resulting from the public comment period. When substantive public comments are received, they are generally staffed with the state proponent, Environmental Program Manager, state Public Affairs Officer, NGB-ARE, and NGB Public Affairs Environmental Office for the purpose of generating responses. The state proponent is then responsible for incorporating the comments and responses into the EIS and producing the Internal FEIS.

9.2.5 Review of the Internal FEIS

Upon completion of the Internal FEIS, the document is staffed within the state ARNG and NGB for review and comment through a process similar to that used for the Internal DEIS (see Section 9.2.2). Once this review is complete, the state proponent revises the document, incorporating comments, and produces the Draft FEIS.

9.2.6 Review and Approval of the Draft FEIS

Following approval of the Draft FEIS by the Deputy Director of the ARNG, the NGB forwards 15 copies of the document to HQDA for staff review. HQDA provides comments back to the state proponent within 30 to 40 days. An IPR meeting may be held by appropriate state ARNG, NGB, and HQDA offices to resolve outstanding issues and concerns. The state proponent is then responsible for incorporating HQDA's comments and producing the FEIS.

9.2.7 Public Review of the FEIS

Processing of the FEIS and NOA package and distribution of the FEIS to the public are conducted in the same manner as described in Section 9.2.4 for the DEIS. In this case, however, the FEIS is made available to the public for a minimum 30-day public review period, with no public meetings. As the proponent, the state ARNG may not take any action, other than planning the proposal, until the 30-day public review period has concluded and the ROD has been approved and signed.

9.2.8 Approval and Release of the ROD

The state proponent initially prepares the ROD in coordination with the Environmental Program Manager, state Public Affairs Officer, NGB-ARE, and NGB Public Affairs Environment Office. The draft ROD is submitted for HQDA and NGB staffing following public distribution of the FEIS. An NOA package for the ROD is also prepared, similar to the package prepared for the DEIS and FEIS (Sections 9.2.4 and 9.2.7, respectively), and submitted along with the draft ROD for staffing.

NGB is responsible for submitting the ROD and NOA package to HQDA for concurrence. Upon completion of HQDA and NGB staffing, the Deputy Director of the ARNG may then sign the ROD. Upon final approval and signature of the ROD, HQDA becomes responsible for delivering the IMC to appropriate congressional offices. OPA then makes an announcement regarding the approved ROD through release of the MFC, with Qs&As, to the news media. At the same time, the state Public Affairs Officer communicates the availability of the ROD through display advertisements and legal notices in local newspapers, similar to the public notices for EAs (see Section 9.1.3). The ROD is also mailed directly to interested parties identified during the EIS process. Although not required under CEQ and Army regulations, the NGB typically requests that HQDA submit the ROD, or NOA of the ROD, for publication in the *Federal Register.* Implementation of the preferred action may begin immediately following signed approval of the ROD.

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10.0 REFERENCES

Federal Statutes, Regulations, Executive Orders, and Memoranda

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Antarctic Science, Tourism, and Conservation Act of 1996 (Public Law 104-227)

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DoDD 6050.7 Environmental Effects Abroad of Major Department of Defense Actions

DoDI 4715.5 Management of Environmental Compliance at Overseas Installations

DoDI 4715.9 Environmental Planning and Analysis

AR 5-10 Stationing

AR 5-18 Army Stationing and Installation Plan

AR 70-1 Army Acquisition Policy

AR 95-2 Air Traffic Control, Airspace, Airfields, Flight Activities, and Navigational Aids

AR 200-1 Environmental Protection and Enhancement

AR 200-2 Environmental Effects of Army Actions

AR 200-3 Natural Resources—Land, Forest and Wildlife Management

AR 200-4 Cultural Resources Management

AR 200-5 Pest Management

AR 350-4 Integrated Training Area Management (ITAM)

AR 380-5 Department of the Army Information Security Program

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